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ON THE

HUSBANDRY

AND

INTERNAL COMMERCE

OF

BENGAL.

BY

HENRY THOMAS COLEBROOKE,

LATE OF THE BENGAL CIVIL SERVICE.

CALCUTTA, PRINTED, 1804.

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1884.

ADVERTISEMENT.

BY THE AUTHOR.

An unfinished treatise on the Husbandry and Commerce of Bengal, which was the joint production of several Gentlemen conversant with different branches of the subject, was printed at Calcutta nearly ten years ago, for private circulation, and has remained unpublished for various reasons, but principally because the authors intended to revise and complete the work at a future period.

Extracts from it having since appeared in more than one publication, the author of the first portion of the treatise, however conscious that it is the least valuable and interesting, has thought it necessary to reprint an amended edition of that part, which was exclusively written by himself. The remainder of the original work related to manufactures and external commerce, and was chiefly written by a Gentleman now deceased. As it never received the corrections of its author, and the revision of it is a task to which his colleague does not feel himself competent, it has been judged expedient to confine the present volume to the distinct subjects of Husbandry and *Internal* Commerce.

It may be proper to apprise the reader, that the original treatise was written in 1794, and was corrected for this edition in 1803. Several passages already require alteration since the last revision, and still more since the work was first printed. The reader is requested, therefore, to bear in recollection, that he does not peruse a composition of very recent date

PREFACE

TO THE

LONDON EDITION.

At a moment when the attention of Parliament and the country is again imperiously called to the situation of the British interests connected with the East Indies, the republication of a work, deservedly valued by those who had perused the first Edition, cannot but be acceptable.

It is much to be regretted that the premature death of one of its original compilers, and the avocations of the learned writer of what is now produced, deprive the public, for the present, of a complete edition.

In order to account for the new orthography in which these remarks are now printed, it may not be improper to mention that its author is not only a member of the Asiatic Society, but, from his critical knowledge of the *Sanskrit* and other Oriental Languages, highly capable of spelling the foreign terms according to the original words.

NOTE BY THE EDITOR.

THE history of this Essay is somewhat curious. Its author was Henry Thomas Colebrooke of the old Bengal Civil Service, whose only surviving son, Sir Edward Colebrooke, published in 1872 an account of his father's life, as an introduction to the Miscellaneous Essays of which his father was the author. Max Müller remarks that although the career of Mr. Colebrooke, as a servant of the East India Company, was highly distinguished, his most lasting fame will not be that of "the able administrator, "the learned lawyer, the thoughtful financier and politician, "but that of the founder and father of the Sanskrit "scholarship in Europe." Mr. Colebrooke was the son of a wealthy London banker, Sir George Colebrooke, a Member of Parliament and Chairman of the East India Company in 1769, four years after the acquisition by the Company of the Dewanship of these Provinces. When in later years, Sir George Colebrooke fell into pecuniary difficulties, Indian appointments were successively obtained for his two sons, James Edward, and Henry Thomas, who were both nominated to the Bengal Civil Service; and the former of whom held office for some time, in the Secretariat of Warren Hastings. The younger brother started for India at the age of eighteen, and arrived at Madras in 1783, ten years before the final arrangement of the Permanent Settlement by Lord Cornwallis. He seems to have spent the first two or three years of his service in Calcutta, when "drinking, gambling, and extravagance of all kinds, were tolerated in the best society." Colebrooke was yet barely 20 years of age, and did not, we are told, "entirely escape the evil effects of the moral atmosphere in which he had to be." But even then we read, that he would retire to his "midnight Sanskrit studies, unaffected by the excitement of the gambling table." Hastings seems to have done

little for either brother; and it was not till 1786, a year after Hastings had left India, that the younger of them, the writer of this essay, received his first active official appointment as Assistant Collector in Tirhoot. Three years later, 1789, he was transferred from Tirhoot to Purneah, and when he first determined to become an author, the subject which he chose was not antiquarian, but practical. We find him writing to his father in 1790 : "My subject "should be connected with those matters to which my "attention is professionally led. One subject is, I believe, "yet untouched—the agriculture of Bengal. On this I have "been curious of information, and having obtained some, "I am now pursuing my enquiries with some degree of "regularity." The fact is, that Colebrooke with some of his friends, very early discovered the evils of the commercial system, pursued by the Company. He was a free-trader by conviction; and "warm with indignation at the "folly and injustice of the policy carried out by England, "*with regard to her Indian subjects.*" *The result was, that* he, and Mr. Anthony Lambert, to whom he refers in the advertisement at page 3, as "the gentleman now deceased," decided to embody their views in a joint work, which they privately printed in 1794, under the title of *Remarks on the Present State of Husbandry and Commerce in Bengal.* He had paid considerable attention to the husbandry of the people, and the first portion of the joint treatise was his own work entirely, and forms the essay we have reprinted, and now present to the public. The original treatise, though printed in 1794, a year after the Permanent Settlement, was not published, but was sent to England and privately submitted to Mr. Pitt, the Prime Minister of the day, and to several other persons of influence. It seems to have produced a considerable impression, and *to have been suppressed,* "on account of the dangerous free trade principles, which it supported with powerful arguments." Colebrooke acquiesced for the time, in the discretion which his friends had exercised, but in 1804, reprinted his own part of the treatise, and published it, both in Calcutta and in London. Max

Müller tells us that he was considered in consequence, by the authorities of Leadenhall-street "as a dangerous young man," and that it has sometimes been supposed that his advancement in India was slower than it would otherwise have been. It was in the great field of Law, however, and still more of Sanskrit literature, that his chief triumphs were achieved. He spent 33 years of his life in India, not retiring therefrom until 1817. There was no man in India we are told, except Colebrooke, who could carry on the work which Sir William Jones had left unfinished, *viz.*, 'The Digest of Hindoo and Mahomedan Laws,' in the completion of which, Mr. Colebrooke's labours appear to have been invaluable.

The value of the present treatise is unique. It contains so far as we know, the sole picture we possess of what "Bengal and its Agriculture actually were, at the time of the "Settlement, while its value is enhanced by the fact that "as an author,' in the words of Max Müller, he "never "allows one word to escape his pen for which he has not his "authority." His exactness as an observer, and the fact that the essay is didactic rather than controversial, greatly add to its present value, and we could hardly, we believe, do a greater service at this moment, to the Government and the community alike, than by reproducing the essay, which has long been inaccessible, and out of print.

And now let us attempt to summarize the main facts in the condition of these Provinces, at the time when the Permanent Settlement was made, as recorded by so close an observer.

One of the chief delusions under which the Rent Bill was brought forward in 1880, was the belief that the zemindar had so heavily enhanced the rents which the cultivator was paying, that they were out of all proportion to the rates that were being levied at the time of the Settlement. We have experienced great difficulty in obtaining any informa- as to the price of agricultural produce, at the time when the Settlement was made. We might reasonably have expected that the local Secretariat, or the Board of Revenue, would have been in possession of statistics so simple as

these, the absence of which would make it impossible to compare the rentals of the time, with those of subsequent periods. As a fact, so little sense has there been of the value of such information, that no Government in the country seems to possess any record whatever, of the ordinary prices of produce, earlier than the year 1861. In pursuing our own independent researches, we enquired in every quarter we thought at all likely to possess such records. We sought the aid of several of the oldest zemindar families in the provinces, but they could render us none. In these circumstances, it occurred to us to renew a search that we began twenty years ago, for this essay of Mr. Colebrooke's, and to our great delight at last found a copy of it, in the Metcalfe Library. The value of the essay is altogether unique. We have here no mere desultory impressions of fact, but the results of an enquiry made at the time, by an observer who, in the words of Max Müller, already quoted, "never allowed one word to escape his pen, for which he had not his authority" (p. 256, *Essays.*) We learn then from Mr. Colebrooke, that the prices of the main articles of produce at the time of the Settlement, were as follows (p. 15) :—

Bajree, Joar, and Maize ...	...	8 annas per maund.	
Pulse of all kinds ...	...	10	,, ,,
Rice, Wheat, and Barley	...	12	,, ,,

Comparing these statements on page 15, with those of page 20, and the foot-note to p. 67, it seems to be pretty certain that these rates represent a somewhat high, or full average. For, although the writer tells us (p. 15) that the above prices were arrived at, by taking "the average of "many enquiries, in the course of which the cheapest and "dearest provinces have been compared," we read (p. 20) that "in computing the prime cost of production, and the "price of labour," he had used no information from any district but "the dearest, and most productive;—namely, "Burdwan, 24-Pergunnahs, Nuddea, and the town of "Calcutta." Again (p. 67) we read—

Without famine or scarcity, we have known corn four times dearer at the first hand in one year, than in the preceding. In a cheap district, rice in the husk sold one season as low as 8 mans for

the rupiya. In the following year it was eagerly purchased at the rate of 2 mans.—*P.* 67.

These statements of themselves, show with what care Mr. Colebrooke was accustomed to make his enquiries. "The great value of money, and the cheapness of labour in "Bengal" (p. 30) impressed him we learn greatly, and the minuteness and caution with which his every observation is recorded, invest the essay with a value that is priceless in this enquiry. In addition to these important statements, as to the money value of the great staples of production at the time, he dwells at length upon the fact that "Cattle constitute the peasant's wealth" (p. 69). The "dairy man will contract, without wages, to deliver 2½ "seers of clarified butter, for a *man* of milk. At this rate "the owner should receive 37½ seers of clarified butter for "15 mans of milk, and may dispose of it at Rs. 7½." We thus get at the price of the great article of ghee, at the period:—

	seers.		annas.
1794 ...	37½	for Rs.	7½=3·2 per seer.

At page 61, we learn that the average price of cattle for husbandry throughout Bengal, might be taken at somewhat lower than Rs. 5, as they were bought in the vicinity of Calcutta itself at Rs. 5 or Rs. 6 per head; and that the value of a buffalo milch-cow might be taken at Rs. 20 (p. 69.) The wages of the agricultural labourer "do not "on the average exceed Re. 1 per mensem, and in a cheap "district, we have found the monthly hire as low as eight "annas." (p. 60.)

Now with this exact information in our hand, we are no longer in any doubt as to the weight of present rentals, compared with those that were exacted at the time when the Settlement was made. The gross assessment upon the zemindar at that time, may be stated roughly at Rs. 3,00,00,000—three crores of rupees—the actual rentals demanded of the cultivator, probably not being less than four or five crores. Estimate the rental however, at what we may, it is sufficiently clear that from the change which has since taken place in the value of money alone, we must

multiply that rental four times over—16 crores of rupees—to make it represent a rental of equal pressure to-day. And now observe how this single consideration, sweeps away altogether such impressions as those cherished by the gentlemen who drafted the Rent Bill, one of whom (Mr. O'Kinealy) has, very conveniently for our purpose, reduced them to the following shape. At page 443 of Vol. II of the Report of the Rent Law Commission, we find him writing :—

I would ask the members of the Committee to consider how far it is advisable to give any further facilities for enhancement, without protecting the ryots from the ejectment theory, which has more or less developed within the last seven or eight years. The Government *jumma* of the Permanent Settlement was about Rs. 2,85,87,772 or eight-tenths of the gross rental. One third of the land was waste, it is said. On these conditions, if the whole of Bengal had been under cultivation, the gross rental would be Rs. 4,76,46,203. According to the Board of Revenue, it was in 1877 equal to Rs. 13,03,78,915. In other words, the rates of rent which were intended to be fixed by the Permanent Settlement, have been trebled, and the ryots are now being compelled to pay an excessive exaction of Rs. 8,27,32,733 yearly. If this annuity be valued at 20 years' purchase, it appears that we have deprived the cultivators of the enormous sum of £165,100,000 sterling, and given it to the zemindars, who still cry for more.

Observe the series of astounding errors embodied in these twenty lines, and yet it was in the full belief that these strange delusions represented the facts of the position, that the entire Land Bill was conceived and drafted. Mr. O'Kinealy compares the '*assessments*' paid by the zemindar to the State in 1793, with the *rentals* which, he says, the zemindars are now exacting, and then exclaims against the extortion which characterises the enhancement from Rs. 2,85,00,000 to Rs. 13,00,00,000. We have no means unfortunately of ascertaining the gross amount of the *rentals* in 1793, but as the *assessments* upon the zemindar were nearly three crores (Rs. 2,85,00,000), the rents are not likely to have been less than four to five crores, for it must be remembered that let the rentals be what they may, nominally, the zemindar recovers only a percentage of the sum. Thus the Board of Revenue tell us

in their last Report, 1883-84, that of the Rs. 13,00,00,000 of nominal rentals *now* levied, the zemindar is seldom able to collect more than from 60 to 75 per cent. With the same crude haste, Mr. O'Kinealy seems to have forgotten altogether, that a change in the value of money might possibly have taken place. We now know that so vast has been the change, that a gross rental of four crores in 1793, means an exaction of sixteen crores to-day, *simply to preserve rentals at the same pressure.* Again, he reverses the proportion between the cultivable land and the waste, and assumes that two-thirds were under tillage and one-third waste, whereas Mr. Colebrooke tells us that but one-third was tilled, and two-thirds waste. The 30,000,000 of acres under tillage in 1793, have now become 60,000,000 to 70,000,000, with the effect of course of reducing the pressure of the present rentals by one-half. He forgets further that whereas the population of the three provinces was but 25 millions in 1793, the people number to-day upwards of 60,000,000; and lastly, that whereas the export of produce was nominal in 1793, the exports amount to-day to 30 croros of rupees. That *any* writer should have blundered so frightfully, is a matter of surprise, but that *this* writer should be the great authority upon whom his colleague, Mr. Mackenzie, relied, when he charged the zemindar with rack-renting the people, provokes a smile.

With this essay of Mr. Colebrooke's in our hand, the fact becomes as clear as the noon-day sun, that the zemindar has so apathetically and carelessly, or else so timidly, asserted his rights, that he has allowed his rents to fall almost to nothing. Assume, as we safely may, that the gross rental of 1793 was four crores of rupees, observe what it ought to be to-day, without any enhancement at all—

1793.		*Extended tillage.*		*Change in money.*		*1884.*
Rs 4,00,00,000	×	2	×	3	=	Rs 24,00,00,000

A rental of four crores in 1793 would represent twenty-four crores to-day, from the mere increase of area under cultivation, and the change in the value of money. Now it will be easy enough to reply to this exposure, if there is any

reply. We have reprinted Mr. Colebrooke's essay, for the very purpose of placing in every one's hands, the facts which convict either the Rent Commission, or ourselves, of indulging the wildest dreams. Which of the two it is, we leave the public to say.

With Mr. Colebrooke's invaluable essay in our possession, we are now able for the first time, to produce the following table of comparative statistics, concerning the land of these provinces, under the Settlement of 1793 and in 1883 :—

	1793.	1884.
Population	... 25,000,000	... 60,000,000 upwards.
Acres under tillage	... 31,000,000	... 70,000,000 acres.
Gross Rental on Ryots	Rs. 4,00,00,000	... Rs. 13,00,00,000 (less
Prices of Staples—		
Grain	... 8 to 12 ans. p. md.	... Rs. 2 to 3 p. md.
Ghee	... 3 annas p. seer	... 12 to 13 ans p. seer.
Cattle	... 4 to 5 Rs. p. head	...Rs. 20 to 30 p. head.
Wages of Labour (unskilled)—		
Agricultural	... 8 annas p. month	... Rs. 2 per month.
Urban	... 1 Re.	... Rs. 6 to 7 p. month.
Value of Exports	... Estimate £2,000,000	... £30,000,000
Value of Money	... 100	... 33·0
Gross Value of the Harvests	... Rs. 32,00,00,000	Rs. 2,50,00,00,000
Proportion of Rents to harvests	... One-eighth	One-twenty-fifth.

It is impossible to overrate the value of these statistics in the present juncture of affairs, when the zemindar is accused of having so abused his powers under the Settlement, to rackrent and evict his tenantry, that it is necessary for the State to cancel the Settlement. For practically, that is what the Tenancy Bill really does. These simple statistics show—that the value of money has undergone so vast and complete a change in these provinces, that the rupee is to-day not worth one-third, probably not one-fourth of its exchange value at the time of the Settlement. The population has risen from 25 millions, to between 60 and 70 millions. The acreage under cultivation from 30 millions, to between 60 and 70 millions. The exports from nothing, to the vast sum of £30,000,000 sterling a year, and the gross value of the harvests from £32,000,000 to not less

than eight times that amount, £250,000,000. As every one knows, or ought to know by this time, the Land Revenue, as it is called, was settled by Lord Cornwallis with the zemindar in perpetuity in 1793, at a time when every interest connected with the soil had been ruined by a century of anarchy, attended and followed by extortion so cruel as to make their record the most shameful feature to this hour, in the history of our rule. But twenty years before this unwise and ruinous Settlement was made, the provinces had been desolated by a famine (1770), the memory of which is still fresh in the minds of the people, for the horrors with which it was accompanied. Had Lord Cornwallis but stayed his hand for a few years, he would have seen the provinces rapidly recovering their former position, under the peaceful rule established by us therein. Instead of this, the fatal error was made of selecting the very period of the deepest depression ever known therein, to effect a Permanent Settlement of the State demand upon the land, *in money*. Had but the wisdom been given to him, to settle the State 'share in the produce' permanently at one-sixth of the gross harvest, leaving its commutation into money rates to periodical adjustment thereafter, as was done by the great Hindoo Minister (Todur Mull) under Akbar, the assessments upon the zemindar would have risen *pari passu*, or nearly so, with the change in the value of money. Omitting to do this, the whole Land revenue was abandoned to the zemindar, at a fixed charge of less than three crores a year, while the zemindar in his turn has asserted his rights so apathetically, or with such timidity, that instead of the rental representing to-day as it ought to do, one-fourth to one-sixth of the produce, it is doubtful if it represents even one-twenty-fifth. Low rentals are the parent of two very serious evils; they lead either to the most careless husbandry, as was remarked by Arthur Young in his famous *Tour*, or inevitably beget the practice of sub-letting, with its attendant evils of middlemen, and eventual rack-rent. All three processes have been vigorously going on in these provinces since the Settlement. The zemindar has carelessly sub-let to the

putnidar, and the *putnidar* to men below him, until we have a mass of middlemen tenure-holders to deal with, who would never have come into existence at all, had the zemindar but wisely enhanced his rentals as money changed in value, or as the acreage under tillage became widened by the growth of the population. The zemindar's sin has been his careless neglect of his own interests, by which the interests of the Commonwealth have suffered, from their intimate association with his own. Every excuse however, is to be made for him. The Settlement from the very first, made him the butt of every shaft of envy and ill-will. Landlords as a class are unpopular everywhere and always, and there can be no doubt whatever, that it has been the odium incident to every attempt to enhance rent, that has made so many of the class sub-let their lands, and the whole body of them show a timidity in the assertion of their rights, that has produced nothing but mischief. Had this miserable Settlement never been made, it is as clear as the noon-day sun, that Bengal might have yielded the State a revenue of £25,000,000 to £30,000,000 sterling a year from the land alone (*khiraj*), while the zemindar is ignorantly denounced as rack-renting the soil, by an exaction of less than half that amount.

This protracted controversy over the Rent Bill, and the endless discussion that its successors have produced, promise this one good to us ; namely, that the true situation of affairs will at last be understood. To legislate as we are now attempting to do, upon the assumption that the ryot is rackrented, is to act upon the grossest delusion a legislative body ever entertained. The legislation really required is the legislation that was unconditionally, and constantly promised, before these Bills were ever thought of. Every public interest demands that the zemindar should have proper legal facilities given to him, for recovering his rents as summarily as we make him pay the 'assessments' upon him, and for enhancing those rents moderately, and in fair proportion to the rise in the value of the land, and its production. It is an act of grievous wrong to the zemindar, that these facilities have been withheld so long,

seven millions ; but this estimate included the province of Benares (p. 10.) The estimate was not hastily adopted, but rests, as the reader will find, upon observations as minute as it was perhaps possible to make, in the absence of a regular census. On the principle which the author finally adopted, the population of Bengal, Behar, and Orissa must have been about twenty-five millions, when the Settlement was made (p. 11.)

In Mr. O'Kinealy's note upon the Rent Bill, which we have quoted above, it will be seen that he estimates two-thirds of the provinces to have been under cultivation at the time of the Settlement, and the remaining one-third to have been waste. We long since stated our conviction in the *Statesman*, that these proportions ought to be reversed, and we have now the authority of Mr. COLEBROOKE for saying so. He estimates 'one-third only to have been under tillage' at the time, excluding lays or fallows (p. 17.) The reader will weigh for himself, the reasons which Mr. Colebrooke advances, in every case, for the estimates at which he arrives, and it is impossible we say, to exaggerate the value of these estimates, rescued by us so opportunely from oblivion, in the present grave juncture of affairs. In direct disproof of the many rash assertions that have been made by the framers and apologists of the new measure, we have the clear and distinct testimony of the author to the following facts :

That the general rates of rental in the provinces at the time of the Settlement, varied from one-third of the gross produce to nine-sixteenths (p. 35.)

That the pergunnah rates, as they were called, had long been lost, or become obsolete, and that the zemindar exacted whatever rental he was able to collect (p. 39).

That tenant right in any form, was unknown in the provinces, and that the utmost confusion prevailed everywhere, as to the terms on which the ryot held his lands (pp. 39, 46, 47.)

That the zemindar it was who fixed the rental, and that he did so annually, with due regard to seasons (pp. 44, 52).

the reputation of the nation for good faith, in these days, that a course is being boldly adopted by us, that no one has ever ventured to suggest in a whisper, until now. We do all parties to this legislation the justice to allow, that its real character was not discerned by its authors, nor by its promoters, until very lately. Light is at last breaking upon the subject, and there are two courses before us. The only safe, honorable, and wise course, is to admit the error that has been made, and to abandon the present line of legislation, and make a fresh start altogether. If the Government has but the moral courage to do this, there will be no difficulty, in the light which these long discussions have shed upon the subject, in framing a Bill that will be just both to the zemindar and to the ryot, carefully avoiding to touch any fact of their relations whatever, that does not really *call* for legislation. The present measure attempts fifty times too much. Instead of being carefully restricted to the plain wants of the people, it is an attempt to construct a new set of relations, usages, customs, and rights altogether. It abolishes wholesale, what the people wish to retain, and forces upon them regulations, that they will never conform to, but under compulsion.

It is because of this, that we declare the measure to be very wantonness itself. What wise Legislature ever moves in this rash way in advance of the people, forcing upon them regulations that they do not desire, and abolishing innumerable customs, usages, and rights to which they cling? If Lord DUFFERIN is wise, he will refuse to let the measure advance a step further, until he has acquainted himself fully, with the true position in which matters stand.

Mr. Colebrooke tells us, that former computations as to the population of the three provinces, had carried the number to eleven millions, but that an official enquiry instituted in 1789, four years before the date of the Settlement, had raised the estimate to twenty-two millions. Sir William Jones hinted at the higher estimate of twenty-four millions, while Mr. Colebrooke's own enquiries and deductions, led him to the conclusion that the population might be regarded with some confidence, as approximating to twenty-

seven millions ; but this estimate included the province of Benares (p. 10.) The estimate was not hastily adopted, but rests, as the reader will find, upon observations as minute as it was perhaps possible to make, in the absence of a regular census. On the principle which the author finally adopted, the population of Bengal, Behar, and Orissa must have been about twenty-five millions, when the Settlement was made (p. 11.)

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That the zemindar it was who fixed the rental, and that he did so annually, with due regard to seasons (pp. 44, 52).

That the evil of sub-letting existed, but was not recognized as a legal right (p. 42).

We might go on to show that almost every contention put forward by the authors of this new and most dangerous legislation, is directly negatived by the essay; but we have said enough. The opportune recovery of the treatise ought to put an end at once to the pretence that the legislation which is now contemplated, is simply a return to the condition of things that prevailed at the time of the Settlement. With an authority that cannot be gainsaid, it shows that condition of things to have been wholly misapprehended, by the framers of the measure.

R. KNIGHT.

"*Statesman and Friend of India*" Office,
CALCUTTA, DECEMBER 1884.

CONTENTS.

ERRATA

At page 18 for Rajshahi Rs. 2,40,00,000 Read
Rs. 24,00,000

CHAPTER I.

General Aspect of Bengal.—Its Climate, Soil, and Inhabitants.

THE regions, immediately governed by the Presidency of Fort William, comprehend the whole Subas of Bengal and Bihar, a part of the adjoining Subas of Allahabad,* Orissa,† and Berar,‡ and some tracts§ of country which had maintained their independence, even in the most flourishing period of the Moghul Empire. But these are inferior, both in extent and in value, to the province of Bengal, and for this reason, when we use that name, without any express limitation, we mean all the provinces over which Great Britain exercises avowed sovereignty, committed to the immediate administration of a council at Calcutta.

The first aspect of Bengal suggests for this kingdom the designation of a champaign country. The elevated tracts, which it does contain, are considered to be only an exception to the general uniformity, and the inundation, which annually takes place in the regions watered by the numerous mouths of the Ganges, seems the consequence of a gradual descent, and does not any farther invalidate the notion of a general level. But the physical divisions of Bengal will not be inaccurate, if these distinctions be received as characters, instead of exceptions. The sacred Ganges flows to the sea through a champaign country limited

* Benares is in Suba Allahabad.

† A part only of Orissa is included in the British dominions.

‡ Part of the districts of Ramgerh, &c., is in Suba Berar.

§ Mostly on the northern frontier, viz., part of Morung conquered in the middle of the present century, and Cooch, and other provinces, which have become tributary since the English acquired their present influence in Bengal.

by chains of mountains, and by elevated tracts, which Bengal touches, and on which it even encroaches in many places The principal stream of the Ganges, losing its sanctity after sending a hallowed branch* towards the sea, inundates, in its subsequent progress, the tracts† through which it flows This portion of Bengal, not in considerable in its area, is the most valuable for its produce and manufactures The elevated tract, occupying the south west angle of this province, is not only inferior in extent, but is of less note in the views of commerce or finance Engaging little attention from the political observer, it might yield its place in the physical divisions of Bengal, to a distinction founded on the characteristic produce of different parts of the champaign country Rice, which is luxuriant in the tract of inundation, thrives in all the southern districts, but, in the ascent of the Ganges, it is observed gradually to yield the first place in husbandry to wheat and barley The mulberry, acclimated in the middle provinces of Bengal, shows a better defined limit where it meets the culture of the poppy, which is peculiar to the northern and western provinces This distinction is not insignificant, though it do not extend to many productions Sugar and Indigo are common to the whole champaign, and

* The Bhagirat hi, or Kasimbazar, River

† The tract of annual inundation (for which see the maps in Rennel's Atlas) was anciently called Beng, whence, probably, the name of Bengal is derived The upper parts of Bengal proper, which are not liable to inundation, were called Barendra, and are mostly north of the Ganges On the West of the Bhagirat hi were Utter rari and Dacshin rari The east of the same river was Bhagre Other districts are also included in Bengal, as Anga, Saubira, Chaura, Halavarta, Mala, Gaura, and, in Bihar, are found Magadha, Naipura, Mit'hil a, or Tirabhucti, Betiapa, and many others These names are yet unforgotten, and are even more familiar to the Bengalese than the sub divisions of the Suba into Sircars, as formed under the Moghul government and as still preserved in official documents The present geography attends to the limits of jurisdictions according to the different systems which have been adopted for the Administration of Bengal They have undergone frequent alterations from the Chaclas of Jaafer Khan to the present Zilas.

so are coarse cloths; coarse, at least, when contrasted with the more delicate fabrics of the tract subject to the annual inundation.

The distinction, which was first noticed, is not inconsistent with one remarked by the Hindus themselves. In their opinion, the resort of the Antelope sanctifies the countries graced by his presence, while his absence degrades the regions which he avoids. This seems more connected with physical observation than with popular prejudice. The wide and open range, in which the Antelope delights, is equally denied by the forests of the mountains and by the inundation of the fens.

Geographical divisions may be likewise described, which shall be consistent with sensible differences of climate within the limits of this province. The periodical winds, that prevail in the Bay of Bengal, extend their influence over the flat country until they are diverted by chains of mountains into another direction, nearly correspondent however with the course of the Ganges. Northerly and southerly winds blow, alternately, during unequal portions of the year, over that part of the province which faces the head of the bay. The northerly wind prevails during the cold season, a southerly one during the hot; but the period of their change seems to be earlier on the eastern side of the Delta of the Ganges than on the west; corresponding herein with a similar difference in the periodical winds on the respective shores of the bay. The seasons of Bengal conform nearly with these changes of the prevailing winds. They are commonly distinguished by the terms of cold, hot, and rainy; but the natives on the result of closer observation, subdivide them, and reckon six seasons, each containing two months.

The spring and the dry season occupy four months, during which the heat progressively increases until it becomes almost intolerable even to the natives themselves. In the middle parts of Bengal, however, the extreme sultriness of the weather is moderated by occasional thunder storms, accompanied by rain or hail, and driven by sudden

earth assumes, in many places, a firm texture, and forms a stone named Kunkur * In some parts, iron ore enters into the composition, and gives it a still firmer texture A similar accretion of sand and clay bears the same appellation Silicious stones of various kinds which have fallen from the hills, chequer the contiguous plains, and form one more exception to general uniformity If the variable proportions of clay and sand, and the circumstances of frequent alterations in the channels of rivers, be considered great inequality of soil may be expected, though it be composed of few substances.

In his progress through Bengal, the traveller will not confine himself to remark the natural diversity in the aspect of the country, but will compare the neat habitations of the peasants, who reside in hilly regions, with the wretched huts of those who inhabit the plain, and the contrast may suggest a reflection, how little the richest productions and most thriving manufactures contribute to the general comfort of the people at large

In the tract of annual inundation, insulated habitations, and fields raised considerably above the level of the country, exhibit the effects of patient industry In the same tract, during the season of rain, a scene presents itself, interesting by its novelty a navigation over fields submerged to a considerable depth, while the ears of rice float on the surface, stupendous dikes, not altogether preventing inundation, but checking its sudden excesses, the peasants repairing to the market, or even to the field, on embarkations, accompanied by their families and domestic animals, from an apprehension that the water might rise suddenly and drown their children and cattle in the absence of their boats. This practice suggests an alarming notion of threatening inundation. And, when we pass the peasant's habitation and observe the level of the flood reaching to the height of the artificial mound on which his house is built,

* One hundred parts of Kunkur have been found to contain forty parts of air, forty-one of calcareous earth, sixteen of silicious earth, and three of calx of iron.

his precaution appears far from superfluous. In the dry season, temporary habitations for the husbandman, in the midst of an extensive plain, which had lately been submerged, form a contrast to the general practice of the peasants uniting in villages and cultivating indiscriminately the adjoining lands.

If dikes to check the inundation show an attention to improvement, reservoirs and dams, constructed for irrigation in the champaign country, are equally a proof of some attention to that object, while wells for watering the fields offer a pleasing specimen of industry in the western provinces But, if something occur to extort applause, the most desultory observation will notice more to censure. The assemblage of peasants in villages, their small farms, and the want of enclosures, bar all great improvements in husbandry It is true, that, in a country infested by tigers, solitary dwellings, and unattended cattle would be insecure, but no apology can be offered for the peasants indifferently quitting the plough to use the loom, and the loom to resume the plough Industry cannot be worse directed Yet this practice is no where more prevalent than in the richest provinces

Picturesque beauties, unknown to level countries, are not more remarkable in the elevated tracts than the characteristic features of a race of people distinct from the inhabitants of the plain Beyond Bengal the natives of the northern mountains, betray by their features, a Tartar origin, descending to more fertile regions in the plains, which skirt the mountains, they people the northern boundary of Bengal On the eastern hills, and in the adjacent plains, the peculiar features of the inhabitants declare with equal certainty a distinct origin, and the elevated tract, which Bengal comprises on the west, is peopled from a stock obviously distinct, or rather by several races of mountaineers, the probable aborigines of the country * In

* The mountaineers are most evidently distinguished by religion, character, language, and manners, as well as by their features, from the Hindu nation. Under various denominations,

Bihar; and we shall subjoin arguments which might lead us to compute a greater number. We cannot, therefore, hesitate in stating twenty-seven millions for the whole population, including the province of Benares.

First. An actual ascertainment* found 80,914 husbandmen holding leases, and 22,324 artificers paying ground rent, in 2,784 villages † upon 2,531 square miles. Allowing five to a family, this gives more than 203 to a square mile; and, for the whole of the Dewani provinces, at that proportion, it gives a population of 30,291,051; or including Benares, 32,987,500; since the area of Bengal and Bihar is 149,217 square miles, and, with Benares, not less than 162,500.

The district, in which this ascertainment was made, is not among the most populous, but is more so than the generality of districts. In some parts of Bengal, vast tracts of land are almost wholly waste: if a fourth of the area were excluded for this cause, the ratio of the population to the square mile, resulting from an ascertainment

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* The result of an official inquiry in the province of Purinya.

† Mauzas. By this term is meant the land attached to a village, not merely the site of buildings. It answers to the word parish more nearly than to any other English term; for, several villages or hamlets may stand in the same Mauza; and, on the contrary the same town will sometimes include several Mauzas. The common size of them may be judged from the ascertainment of 21,996 Mauzas on 18,023 square miles. Estimates have been attempted from the number of inhabitants found in a few villages, deducing thence an argument applicable to the whole number of Mauzas. Such inquiries have been too limited to afford sufficient grounds for an accurate estimate; but the results, which have come to our knowledge, exhibit 179 inhabitants in each village, viz., 92 males and 87 females. The whole number of Mauzas in Bengal and Bihar is not less than 180,000. If there be 1,35,000 inhabited villages, the population should exceed twenty-four millions, exclusive of the inhabitants of cities and large towns. We appeal to the recollection of every person, who has traversed the populous parts of Bengal, whether every village do not swarm with inhabitants? whether every plain be not crowded with villages? and whether every street be not thronged with passengers?

in this district here alluded to, might be taken for three-fourths of Bengal.*

But it must be remembered, that many and numerous classes of people do not pay rent, nor contribute directly to the revenue. Some professions are exempted from ground rent, some classes are excused on account of property, others through motives of respect. The tenants of alienated estates are not comprehended in the ascertainments above mentioned: yet the free lands are equal to an eighth of the whole area of the district alluded to; and they do not bear a less proportion to the assessed lands throughout Bengal. No city, nor considerable town,† was included in the ascertainment, which for that farther reason, may be accounted moderate. Upon the whole we may adhere to the average, first suggested, of 200 to a square mile, in districts which are well peopled.

Second. General measurements are occasionally undertaken for entire perganas, and for larger districts. In the registers of such surveys, the land in tillage, the spots appropriated to special purposes, the waste and barren tracts, and the ground covered by lakes, are distinguished. Many such surveys‡ have been examined, and the following proportion is grounded on them, after making an allowance for great rivers.

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* On this principle, the population of Bengal, Bihar, and Benares, might be rated at 24,740,000.

† Bengal and its dependencies contain five large and as many smaller cities, forty large towns, and a great number of smaller, but not inconsiderable, towns.

‡ For specimens of these surveys, take the following abstracts from several perganas and Sircars Sherifabad, Madarin, &c., measured in 1786, and in Sircar Tajpur surveyed in 1788:

Waste, but reclaimable, as well as forest and sterile, lands	449,086
Ponds	41,805
Free lands	298,275
Productive (including site of buildings) ...	521,909
Bigahs of 80 cubits square	1,311,075

Rivers and lakes (an eighth)	...	3
Deemed irreclaimable and barren (a sixth)	...	4
Site of towns and villages, highways, ponds, &c., (a twenty-fourth)	...	1
Free lands (an eighth)	...	3

Liable for Revenue.

In tillage (three-eighths)	...	9
Waste (a sixth)	...	4
		24

If a fourth of the area of Bengal be excluded, as before, for tracts of land nearly or wholly waste, three-eighths of the remainder give 45,703 square miles; (or omitting Benares) 41,967 square miles, equal to 81,248,112 bigahs, of land tilled and liable for revenue; if half the free lands be cultivated, the whole tillage is 94,790,100 bigahs, or 31,335,570 acres.

In some districts, an inquiry, undertaken in 1790, ascertained the quantity of land tenanted by near seventy thousand cultivators; and it gave an average of less than eighteen bigahs each in *actual* tillage; for the ascertainment comprehends no lays nor fallows, because the husbandman pays rent for no more than he really tills and sows. At this proportion, the whole quantity of 94,790,100 bigahs must be used by 5,266,118 tenants; and, adding artificers and manufacturers at the proportion

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Perganas in Sircar Tajpur, measured in 1788.

Waste, but reclaimable	...	161,225
Barren...	...	123,747
Ponds and roads, &c.	...	24,122
Free Lands	...	143,042
Cultivated	...	301,131
Total Bigahs		753,267

These measurements are exclusive of rivers.

suggested by the ascertainment of 80,914 husbandmen, and 22,324 artificers, in the districts above mentioned, we have 6,719,035 persons paying land-rent and ground-rent. If each of these be deemed the head of a family, the population might be estimated at 33,595,175. But several rents are not unfrequently paid by the same family: for this reason, the number of husbandmen may be thought over-rated; because in the rent-rolls which were abstracted tenants, holding land from more than one owner, or paying two rents to the same proprietor, must unavoidably have stood for two persons. The excess in the estimate, arising from this cause, is perhaps not fully balanced by the various classes which do not contribute directly to the rental.*

Third. Remains to compare the estimated population with the consumption. The food of an Indian is very simple; the diet of one is that of millions, namely, rice, with split pulse and salt to relieve its insipidity. Two and a half ounces of salt, two pounds of split pulse, and eight pounds of rice, form the usual daily consumption of a family of five persons in easy circumstances. Or, according to another estimate, four mans of rice, one man of split pulse, and two and a half sers of salt, suffice for the monthly consumption of a family of six persons, consisting of two men, as many women, and the same number of children. Whence we deduce, for the average consumption of salt in a year, five sers, or ten pounds a head, according to either estimate; or admitting a chatac a day for four persons, as is estimated where salt is moderately cheap, the annual consumption of each person is a little more than five and a half sers, but less than twelve pounds.

The annual sales of salt, under the monopoly of that article by government, exceeded 35,00,000 mans, on an average of five years ending in 1793. The quantity, and

* The same objections occur against an estimate founded on the average rents of tenants.

the price for which it has been sold, have since been much increased, and it is certain that no precautions can entirely prevent smuggling. The exports from Bengal into Assam and other contiguous countries, though not inconsiderable, are probably balanced by the contraband trade and by the illegal manufacture of impure salt obtained from ashes and the mother of nitre. These impure sorts which are deemed salutary and even necessary for cattle, though not equally so for men, were often employed by retailers in adulterating seasalt, and were also voluntarily consumed by the poor; probably they still are so, in some degree, though less than heretofore. The quantity of salt, consumed in Bengal and Bihar, certainly exceeds 40,00,000 mans;* exclusive of Benares, the consumption of which is supplied by its own manufacture, joined with importations from Sambher and other places. That quantity, compared with a supposed population of thirty millions of people, would indicate an annual consumption of nearly eleven pounds a head; but, if we suppose the population not to exceed twenty-four millions, we must then rate the average consumption of salt so high as fourteen pounds, which exceeds all experience in India, even where salt is cheapest.†

From what has been stated as the daily consumption of a family, an average of nine mans a head may be deduced for the annual consumption of grain. The use of wheat and barley, in some provinces, does not materially affect

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* *For a most comprehensive table of the coins, weights, and measures, of India, the reader is referred to page 49 of the Asiatic Register for* 1804, *under the title of home-intelligence.*

† In France, while the Gabelle was in force, the annual consumption of each person was estimated at nine pounds and one-sixth, where salt was sold at 62 livres for the quintal (100lb.); eleven pounds and three-quarters, where it was sold at 33½; fourteen pounds, where it was sold at 21½; and, perhaps, eighteen pounds in districts in which salt paid a moderate duty. See Necker, De l' Administration des Finances, tome 2, p. 12. The French pound was somewhat greater than the English avoirdupois.

the calculation,* but millet, and other small grains, (which constitute the principal food of the poor, and which are not equally nourishing with white corn,) will increase the average.

Several sorts of pulse are raised for cattle, but bear a small proportion to the general tillage; for the cattle are mostly supported on pastures, or on chaff and straw. Corn is imported from several of the countries which border on Bengal; but the exportation exceeds the import; we therefore estimate the produce, consumed by 30,000,000 of persons, at 270 millions of mans, or at 300 millions, after adding grain consumed by cattle: to this again add a seventh for seed, and the whole produce in grain will be 342,857,140 mans; a very moderate produce from tillage estimated at 94,790,100 bigahs.

But the Indian husbandry mixing in the same field corn and other articles of a very different nature, every object must be included in the computation to compare the produce with the quantity of land; and, for that purpose, the grain must be stated at its money-value. This we take from the average of many inquiries (in the course of which the cheapest and dearest provinces have been compared) at the following rates:—

Mans.	*Rupiyas.*
150,000,000 of rice, wheat, and barley, at 12 annas	112,500,000
60,000,000 millet, &c., at 8 annas	30,000,000
90,000,000 pulse, at 10 annas	56,250,000
	198,750,000
Seed reserved for the following season, 43,000,000 mans	28,380,000
	227,130,000
Oil seeds	12,000,000
Sugar, tobacco, cotton, &c.	70,000,000
Sundries	20,000,000
Gross produce of land, *Rupiyas* ...	329,130,000

* Four sers of coarse flour are estimated for the daily consumption of a family consisting of six persons. This is equal to six

In a subsequent inquiry, we shall have occasion to show this to be moderate in proportion to the expenses of husbandry, or to the aggregate amount of rents for the tillage estimated at 95,000,000 of bigahs.

The desultory speculations in which we have now indulged cannot avail to determine accurately the population of these provinces; but they render it not improbable that it has been hitherto under-rated. Undoubtedly it is adequate to undertake greater tillage and more numerous and extensive manufactures than now employ the labour of the Asiatic subjects of Great Britain; but wanting a vent for a greater produce, they have no inducement for greater exertion of industry. If more produce were obtained while no markets were open for the disposal of it, diligence would be unrewarded. The necessaries of life are cheap, the mode of living simple; and, though the price of labour be low, a subsistence may be earned without the uninterrupted application of industry. Often idle, the peasant and manufacturer may nevertheless subsist. A few individuals might acquire wealth by peculiar exertion; but the nation at large can use no more labour than the demand of the market is found to encourage.* If industry be roused, the present population is sufficient to bring into tillage the whole of the waste lands of Bengal and Bihar; and, in most districts, improvement may be expected, whenever new channels of trade are opened to take off more or new produce. Of this we are convinced: aware, however, that the culture does require considerable

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mans of flour annually for each person; or nearly seven mans of wheat. The consumption of barley is reckoned at very little more. The practice of throwing away the water, in which rice has been boiled, accounts for the greater consumption of rice compared with that of wheat and barley.

In England, a quarter of wheat is reckoned sufficient for the annual food of a man; and the whole quantity of bread-corn, raised in Great Britain, has been computed at 14,000,000 quarters. Since a quarter of wheat weighs, on an average, about 480 pounds, that estimate does not materially disagree with ours.

* *This was the case in France shortly preceding the revolution and perhaps in part accelerated that catastrophe.*

labour; for, in the common husbandry, the land yields several crops within the year. But needing no manure, except for some articles, (and manured for these without labour or expense,) the same quantity of land should employ fewer hands in Bengal than in England, since the labours of the husbandman suffer less interruption from the inclemency of seasons.* The improvements, which are to be expected from a better and more diligent husbandry, may be appreciated after reviewing the present system of agriculture.

We must here pause to remark, that the revenue mostly follows a proportion to the area of the districts, as may be shown by a comparison of the area with the revenue collected in 1784; which distant period is taken, because districts have since been new modelled, and their area under late distributions is not ascertained.

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* It has been estimated, that there are 40,000,000 of cultivated acres in Great Britain, probably including meadows. If this computation be accurate, two-thirds of the area of Great Britain are productive. We estimate one-third only of Bengal and Behar to be tilled, but this is exclusive of [illegible]. In England, it should seem, there are four acres of arable and meadow land for every inhabitant; in Bengal, little more than one acre of tilled ground for every person. The present population then, is fully adequate to the cultivation of all land that is now waste.

DISTRICTS.	Deduct for lands nearly waste.		Square miles according to Rennel.	Revenue of 1784.	
* Birbhum	—	—	3,858	6,11,321	
* Bishnupur	—	—	1,256	3,86,707	
Chatgaon, Islamabbad, and Tripura (the woods or forests of the last mentioned district are nearly waste)	9,567	5,250	4,317	6,79,197	
* Dhakha	—	—	15,397	31,62,386	(18
Dinajpur	—	—	3,519	14,60,444	)
Crishnanagar or Nediya	—	—	3,115	10,27,427	
Mednipur	—	—	6,102	8,39,941	
* Purnya	—	—	5,119	10,00,479	
Rajmahl and Bhagelpur (K'heregpur and K'heregdih, nearly waste,)	10,487	5,453	5,034	5,47,600	
* Raj-shahi	—	—	12,909	~~3,40,00,000~~ 24,00,00(	

Silhet	—	—	2,861	2,33,824
* Saren and Bitya	—	—	5,106	13,12,721
Tirhut and Hajipur	—	—	7,815	7,01,234
* Bihar proper, Rotas and Shahabad...	—	—	12,129	24,59,807
Bardwan	—	—	5,174	43,58,026
Pachet, Chhota Nagpur, Palamu, and Ramgerh	21,732	16,732	5,000	1,61,216
Districts, the distribution of whose area is not ascertained, including the productive districts of 24-Perganas, Hugli, town of Calcutta, and Murshidabad	—	—	12,921	61,66,670
Sunderbens, Cuchbihar, and Rangamati nearly waste	—	10,114	37,549	
Total ...			1,49,217	2,75,59,000

The cultivated lands, in the tracts which are here considered as nearly waste, are fully equalled by the waste lands in districts stated by us as well cultivated ; hence the argument on which a fourth of the area has been excluded as desolate. The average of revenue on the whole area is, in current rupiyas, 184 per square mile, on three-fourths, which are well cultivated, it is 246 per square mile. The revenue of most districts, compared with their area, falls between those limits. No ascertainments have been admitted in the preceding computations, but those obtained within the districts marked *, where the revenue was, in 1784, nearly 200 current rupiyas per square mile : this circumstance shows them to be in a middle class, between the depopulated and waste and the populous and highly cultivated, provinces ; between the very cheap and very dear districts.

In the present distribution of districts, the dearest and most productive are Berdwan, 24-Perganas, Nediya, and the town of Calcutta ; the cheapest and least productive are Ramgerh, Silhet, Cuchbihar, and Tripura. We use no information from these, in computing the prime cost of productions and the price of labour.

stage ; and other expedients, common in all countries, are likewise resorted to. These expedients add neither to the expense nor to the toils of husbandry , but the employment of watchmen must be counted as some addition to the labour of agriculture.

After the plant has risen, the rapid growth of weeds demands frequent extirpation . particularly during the season of rains , for few indigenous herbs vegetate in the dry season, and weeding is therefore little, if at all, required for plants which are cultivated in the winter and in the spring. Viewing the labours of the weeders, the observer is not easily reconciled to see them sitting to their work. The short handled spud, which they use for a hoe, permits no other posture but, however familiar that may be to the Indian, his labour is not employed to advantage in this mode of weeding.

The sickle (for the scythe is unknown) reaps every harvest With this, also, much unnecessary labour is employed; not merely from the want of a more convenient implement, but from the practice of selecting the ripest plants which the Indian, taught by the harvest of different plants ripening successively, extends to the gathering of a simple crop. Yet such, sometimes, are the contradictions which custom has established, that while the peasant returns frequently to one field to gather the plants as they ripen, he suffers another to stand long after the greatest part of the crop has passed the point of maturity. He justifies his practice upon circumstances which render it unfeasible to enter these fields to select the ripe plants without damaging the rest, and upon the inferiority of crops which mix with ripe corn, a considerable proportion not fully matured. Though his excuse be not groundless, his loss is considerable, by grain dropping before the time of harvest, in so great a quantity, that if the field remains unsown during the following year, it will nevertheless afford a crop by no means contemptible.*

* Instances of this are frequent : the remarkable result of one deserves to be mentioned. An early inundation covered a very

it also withholds seed till the second month of that season, and reaps the harvest in the beginning of winter. The rice of this crop is esteemed the best, not being equally liable with the other to early decay. In low situations, where the progress of desiccation is tardy, and on the shelving banks of lakes, which retain moisture till the return of the wet season, a singular cultivation sows rice at the end of the rains; and, by frequent transplanting and irrigation, forces it to maturity during the hot season. In situations nearly similar, the husbandman sows rice in the winter for an early harvest, obtained by a similar method at the commencement of the rains.

In almost every plant, culture, in proportion as it is more generally diffused, induces numerous varieties. But the several seasons of cultivation, added to the influence of soil and climate, have multiplied the different species of rice to an endless diversity, branching from the first obvious distinction of awned and awnless rice. The several sorts and varieties, adapted to every circumstance of soil, climate, and season, might exercise the judgment of sagacious cultivators; the selection of the most suitable kinds is not neglected by the Indian husbandman. There is room, however, for great improvement, from the future light to be thrown on this subject by the observations of enlightened farmers.

Other corn is more limited in its varieties and its seasons. Of wheat and barley, few sorts are distinguished; they are all sown at the commencement of the winter and reaped in the spring. A great variety of different sorts of pulse finds it place in the occupations of husbandry.* No season is without its appropriate species; but most sorts are either sown or reaped in the winter. They constitute a valuable article in husbandry, because they thrive even on poor soils, and require little culture. Millet, and

* Peas, chiches, pidgeon-peas, kidney-beans, &c. The sorts most generally cultivated are Pisum sativum, Cicer arietinum, Cytisus cajan, Ervum bispermum, Lathyrus sativus, Phaseolus, Max, Mungo and lobatus, Dolychos bistorus, &c.

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will revive the remembrance of the same practice throughout the south of Europe, where, also, he has already remarked the want of barns and of enclosures; the disuse of horses for the plough; the business of domestic economy conducted in the open air; and the dairy supplied by the milk of buffaloes.*

The plough is drawn by a single yoke of oxen, guided by the ploughman himself. Two or three pairs of oxen, assigned to each plough, relieve each other, until the daily task be completed. Several ploughs in succession deepen the same furrows, or rather scratch the surface; for the implement, which is used throughout India, wants a contrivance for turning the earth, and the share has neither width nor depth to stir a new soil. A second ploughing crosses the first, and a third is sometimes given diagonally to the preceding. These frequently repeated, and followed by the substitute for the harrow, pulverise the surface, and prepare it for the reception of seed. The field must be watched for several days, after it has been sown, to defend it from the depredations of numerous flocks of birds. This is commonly the occupation of children, stationed to scare the birds from the new-sown ground. It is also necessary to prolong the defence of the field in those districts which are much infested by wild boars, buffaloes, and deer. For this purpose a stage is erected, and a watchman is stationed on it at night to scare wild animals, should they approach. In all districts, mays and some sorts of millet, when nearly arrived at maturity, generally need defence from the depredations of birds by day and of large bats by night. For this purpose, also, a watchman is placed on an elevated

* The Buffalo is a native of India, but is now common in Egypt, in Greece, and in the southern parts of Italy. The Gyal, an undescribed species, which must be placed between the domestic bull and the buffalo, is well known in the Eastern parts of Bengal, beyond the Brahmeputre and Megna rivers. It is found there both wild and tame, but has not spread to other parts of the British dominions. The bull of Europe is unknown in India; but several other varieties are here domesticated, as the Zebu, &c. However, we shall, in the sequel of this treatise, use the English names of the species.

stage ; and other expedients, common in all countries, are likewise resorted to. These expedients add neither to the expense nor to the toils of husbandry, but the employment of watchmen must be counted as some addition to the labour of agriculture.

After the plant has risen, the rapid growth of weeds demands frequent extirpation . particularly during the season of rains ; for few indigenous herbs vegetate in the dry season, and weeding is therefore little, if at all, required for plants which are cultivated in the winter and in the spring. Viewing the labours of the weeders, the observer is not easily reconciled to see them sitting to their work. The short handled spud, which they use for a hoe, permits no other posture but, however familiar that may be to the Indian, his labour is not employed to advantage in this mode of weeding.

The sickle (for the scythe is unknown) reaps every harvest With this, also, much unnecessary labour is employed; not merely from the want of a more convenient implement, but from the practice of selecting the ripest plants which the Indian, taught by the harvest of different plants ripening successively, extends to the gathering of a simple crop. Yet such, sometimes, are the contradictions which custom has established, that while the peasant returns frequently to one field to gather the plants as they ripen, he suffers another to stand long after the greatest part of the crop has passed the point of maturity. He justifies his practice upon circumstances which render it unfeasible to enter these fields to select the ripe plants without damaging the rest, and upon the inferiority of crops which mix with ripe corn, a considerable proportion not fully matured. Though his excuse be not groundless, his loss is considerable, by grain dropping before the time of harvest, in so great a quantity, that if the field remains unsown during the following year, it will nevertheless afford a crop by no means contemptible.*

* Instances of this are frequent : the remarkable result of one deserves to be mentioned. An early inundation covered a very

The practice of stacking corn, intended to be reserved for seed, or for a late sale is very unusual. The husk, which covers rice, preserves it so perfectly, that, for this grain, the practice would be superfluous: and, the management of rice serving for the type of their whole husbandry, it is neglected by the peasants in keeping other corn. A careless pile, which waits the peasant's leisure, to thrash out his grain has no defence from the inclemencies of the weather. At his convenience, the cattle tread out the corn, or his staff thrashes the smaller seeds. The grain is winnowed in the wind, and is stored either in jars of unbaked earth or in baskets made of twigs or of grass. *

The want of roads, which indeed could not possibly be constructed to give access to every field in every season, does not leave it in the option of the farmer to bring home all his harvests by means of cattle; but the general disuse of beasts of burden, in circumstances which would permit this mode of transport, is among the facts which show a great disproportion between the husbandry and population. †

Irrigation is less neglected than facility of transport. In the management of forced rice, dams retain the water

extensive tract of ground before the rice had been sown; the landlord remitted the rents, but claimed the spontaneous crop, and he profitted by the accommodation; realising from this harvest a greater amount than that of the rents which he remitted; although in addition to the common expenses, he was at considerable cost to watch the crop, and was probably defrauded of a large proportion of the harvest.

* The practice of storing grain in subterraneous hoards, which is frequent in Benares and in the western provinces, and also in the south of India, is not adapted to the damp climate and moist soil of Bengal. Here grain is hoarded above ground, in round huts, the floor of which is raised a foot or two from the surface.

† In the Decan, the central parts of which are mountainous and thinly peopled, carts are used to bring home the harvest. They are built upon a construction similar to that which prevails in Ramgerh, and other hilly parts of Bengal, and which is particularly well adapted to bad roads and uneven ground. The form of the carts, used in the flat countries of Bengal and Hindustan, is, on the contrary, ill suited for any but the best roads.

on extensive plains, or preserve it in lakes to water lower lands, as occasion may require. For either purpose much skill is exerted in regulating the supplies of water. In some places, ridges surround the field and retain water raised from lower ground by the simple contrivance of a curved canoe swinging from a pole. In other situations, ridges are also formed round the field both to separate it from contiguous lands and to regulate the supplies of water: this is more especially practised in the culture of transplanted rice. Dams, advantageously constructed, assist the irrigation of considerable tracts. In some provinces water is raised from wells, by cattle or by hand to supply the deficiencies of rain. Each of these methods, being within their compass, is the separate undertaking of the peasants themselves: but more considerable works, though not less necessary, are much neglected. Reservoirs, ponds,* water-courses, and dikes,† are more generally in a progress of decay than of improvement.

The rotation of crops, which engages so much the attention of enlightened cultivators in Europe, and on which principally rests the success of a well conducted husbandry, is not understood in India. A course extending beyond the year, has never been dreamt of by a Bengal farmer; in the succession of crops within the year he is guided to no choice of an article adapted to restore the fertility of land, impoverished by a former crop. His attention being fixed on white corn, other cultivation only employs the interval of leisure, which the seasons of wheat and

* In hilly countries, large ponds, and even vast lakes, are easily formed by constructing a dam across the gorge of some valley, which has a considerable declivity. Instances may be found in the hilly parts of Bengal, Bihar, and Benares; but they are still more frequent, and on a larger scale throughout the Decan. In the flat countries of Bengal, there is often a sufficient inequality of ground to afford an opportunity for constructing a dam either to inundate the higher lands or to form a reservoir for watering lower ground.

† *Works of piety, policy, and ostentation, in former days.*

or which might be generally diffused, as annotto and madder, may also be deferred. Enough has been said to show, that husbandry in Bengal admits of much improvement; or rather that the art is in its infancy, or has degenerated. Husbandry was the first science cultivated, under one of the first countries populated; it should therefore seem evident, that, at some very remote area, agriculture must have been well understood. Why so useful a science should have ever fallen so much to decay, is an object of deeper research than we have science to undertake — An ignorant husbandry, which exhausts the land, and neglects the obvious means of maintaining its fertility and of reaping immediate profit from the operations which might restore it; rude implements, inadequate to the purpose for which they are formed, and requiring much superfluous labour; this again ill-divided, and of course employed disadvantageously; all loudly call for amendment.

The simple tools, which the Indian employs in every art, are so coarse, and apparently so inadequate to their purpose, that it creates surprise how he can ever effect his undertaking; but the long continuance of feeble efforts accomplishes (and mostly well) what, compared with the means, appears impracticable; habituated to observe his success, we cannot cease to wonder at the simplicity of his process, when contrasted with the mechanism employed in Europe. But it is not necessary that the complicated models of Europe should be copied in India. A passion for the contrivances of ingenuity has there led to the adoption of intricate machinery for simple operations. The economy of labour, in many cases, justifies the practice, whether an effect be produced at a smaller expense, or more be performed at proportionate cost, but with less labour and expense of time. In Bengal, the great value of money and the cheapness of labour would render it absurd to propose costly machinery: but there can be no objection to simple improvements, which add little to the price of the implements, and fit them to perform, more effec-

tually and with less labour, the object undertaken. The plough is among the implements which stand most in need of such improvements.*

The readiness, with which he can turn from his usual occupation to another branch of the same art, or to a new profession, is characteristic of the Indian. The success of his earliest efforts, in a novel employment, is daily remarked with surprise. It is not so much a proof of ingenuity and ready conception as the effect of patient imitation, assisting a versatile habit which is necessarily acquired where the division of labour is imperfect; and though its performance may surpass expectation, it must ever fall short of the expeditious and finished performances of the expert mechanic, whose skill is formed by constant practice in a more circumscribed occupation.

The want of capital in manufactures and agriculture prevents the division of labour. Every manufacturer, every artist, working for his own account, conducts the whole process of his art, from the formation of his tools to the sale of his production. Unable to wait the market or to anticipate its demand, he can only follow his regular occupation, as immediately called to it by the wants of his neighbours. In the intervals, he must apply to some other employment which is in present request: and the labours of agriculture, ever wanted, are the general resource. The mechanic, finding himself as fully competent as the constant cultivator to the management of common husbandry, is not discouraged from undertaking it at his own risk. Every labourer, every artisan, who has frequent occasion to recur to the labours of the field, becomes a husbandman. Such farmers

* The drill-husbandry is not unknown in India. The very simple contrivances here used for sowing the drill, for covering the seed, and for hoeing the intervals with a plough drawn by oxen, are worthy of remark. Being practised in remote countries, almost unvisited by Europeans, the Indian method of drill husbandry is probably an original invention of the country, and not borrowed from the European practice, which has never yet been introduced into any part of India.

are ill qualified to plan or to conduct a well-judged course of husbandry, and are idly employed, to the great waste of useful time, in carrying to market the paltry produce of their petty farms. If Bengal had a capital in the hands of enterprising and intelligent proprietors, who employed it in agriculture, manufactures, and internal commerce, these arts would be improved; and, with more and better productions from the same labour, the situation of the labourers would be less precarious and more affluent: although the greatest part of the profit might vest with the owners of the money adventured. In agriculture particularly, which is the basis of the prosperity of a country, the want of pecuniary funds is a bar to all improvement. While, on the contrary, the employment of money in agriculture would introduce large farms, and from these would flow every improvement that is wanted in husbandry; and such improvements must naturally extend from agriculture into every branch of arts and commerce. Without capital and enterprise improvement can never be obtained. Precept will never inculcate a better husbandry on the humble unenlightened peasant. It could not, without example, universally persuade a wealthier and better informed class. Positive institutions would be of as little avail. The legislator cannot direct the judgment of his subjects; his business is only to be careful, lest his regulations disturb them in the pursuit of their true interests.

In Bengal, where the revenue of the state has had the form of land rent, the management of the public finances has a more immediate influence on agriculture than any other part of the administration. The system, which has been adopted, of withdrawing from direct interference with the occupants, and leaving them to rent their fields from landlords, will contribute to correct the abuses and evils which had formerly rendered the situation of the cultivator precarious. But not having yet produced its full effect, there is still occasion to review the system of finances, under which abuses had grown, and had placed the occupant in a

precarious situation, as truly discouraging to agriculture as any circumstance yet noticed for, without an ascertained interest in the land for a sufficient term of years, no person can have an inducement to venture his capital in husbandry.

in consequence, another proportion, engrafted on equal partition, has in some places been fixed by government in lieu of all taxes; such, for example, as nine-sixteenths for the landlord, and seven-sixteenths for the husbandman.

Under this tenure, the peasant ought not to reap his crop without express permission* from his superior; but, should the landlord delay to attend for the partition or estimation, the harvest might thereby suffer. For this reason, or to defraud his landlord, the raiat sometimes privately gathers the crop. On these occasions it becomes necessary to measure the fields, and to estimate the produce which has been embezzled, according to the presumed fertility of the soil, compared with other lands in the neighbourhood. If the usual evaluation of different articles of produce were reduced to a table of rates, and the value in kind were turned into money, by a reference to the average-prices of common seasons, it would acquire the same form with the tenure for a rent to be ascertained subsequently to cultivation according to fixed rates; and such is the probable origin of that tenure, which may be considered as a payment in kind commuted for a modus.

The rates ought to be uniform as far as circumstances permit, and the rents of all tenants, within the same village or district, should be regulated by one table. As the quality of the soil, however, cannot be uniform, the rates vary, not only according to the articles of produce, and number of crops gathered off the same field within the year, but according to the soil and situation; such as sandy; exposed to inundation or to drought; annually overflowed; adjoining to, or remote from, the village; and so forth. All these variations, whether by the produce or soil, constitute the rates which compose the table. Other diversities are admitted for the sub-divisions of districts and of villages. But in some places, there is no variation according to soil and produce; on the contrary, one uniform rate is applied to the whole land which is occupied by the same tenant. A putta

* A fee for this permission was formerly levied.

for an adjustment after cultivation by a general table need not specify the rates. It need only contain the term of the lease, the reservation of established taxes, the measure to be used for the land, an obligation to pay all additional cesses which shall be universally imposed, and the periods of payment. The term, specified in a lease of this nature, is commonly the year for which it is granted. A raiat has nevertheless a title of occupancy, in right of which he may retain his land, so long as he continue to pay the rent in conformity with the custom of the country, or with his own particular engagement. Of this more hereafter.

The sum of the rates applied to the measurement, constitutes the original rent in contradistinction to additional taxes arbitrarily imposed, or required for special purposes. They commonly fall under several heads; namely, taxes in general, charges, imposts, contributions, and various fees under their particular denominations. All established cesses ought to be brought on a table showing the amount of the taxes and their proportion to the original rent. But notwithstanding the existence of a table so constructed, a reservation in this and other tenures for new but universal cesses, and the practice of levying them even without such an express stipulation, did formerly render the situation of the tenants precarious. It little availed, that the general consent of the raiats was deemed necessary to the imposition of any tax unauthorized by government; a few leading raiats, gained by indulgences, easily led the multitude.

The measurement is made by a bigah,* which contains twenty biswas. It is a square measure on a side of twenty cat'has; but this varies from three and a half to nine cubits. A pole of the established length ought to be deposited in the public office of the district, sealed at both extremities with the official seal of the province; and the measurement should be made with a pole of

* Other denominations of land-measure are known in some districts. But the bigah is by far the most prevalent.

that length, or with a rope equal to twenty such poles. In either mode the tenant has been commonly defrauded by keeping the middle of the pole elevated, or by withholding a part of the rope. So great has been the customary fraud, that raiats have been known to consent to the doubling of their rates, upon a stipulation for a fair measurement.

The periods of payment are seldom specified; they are regulated by usage grounded on the estimated value of the crops produced in different seasons; and the demand is made in the customary proportions. But, if instalments be specified, it is done by a reference to a separate engagement delivered with the counterpart of the lease.

The tenures did not universally conform with the table of rates. Indulgence was granted to such as by rank or religion were precluded from personal labour. The reduced rates allowed to them ought to be specified in the lease; and, where the reduction has by abuse become almost universal, every lease to raiats must in like manner specify the rates of each person, even though the taxes, payable by some individuals may not have been so reduced.

The simplest tenure of this kind requires an annual adjustment upon the actual cultivation. But in many places the raiat is bound to make good the same amount as in the preceding year, and to pay the excess, if any. This becomes a different tenure; and the stipulation ought to be expressed in the lease. A reduction of rates, obtained on a promise of increasing the total amount of the rent, has unnecessarily given name to a particular tenure, of which any farther mention would be here superfluous. Some tenants have been indulged with leases for an indefinite term, and for an unlimited quantity of land at the established rates. These, commonly, are not liable to new taxes imposed by general consent, and their leases contain a clause to that effect.

Out of the adjustment after cultivation has arisen another form. After making the measurement, the separate account of each tenant becomes a record: and the annual

measurement is frequently omitted in consideration of a compromise, or it is partially executed by measuring the new cultivation, and adhering to the record for the arable land of the preceding year. Upon this is founded the tenure on the record of a general survey, which becomes the rule by which the occupant is to pay rent, until a new measurement be undertaken to equalise or correct the assessment.

Among tenures, we have not mentioned that of paying for the number of ploughs employed* instead of the quantity of land occupied: it is obsolete in Bengal, but is the origin of a tenure which is known in the northern dependencies of this province, and which has become vague and precarious. The limits of the farm are ascertained, but without a survey of the quantity of land. The tenant occupies it in the season of cultivation, and adjusts the rent when the crop is on the ground; but, if the landlord and tenant cannot agree on equitable terms, reference cannot now be had to any certain rule. The farm is transferred to the highest bidder, and the dispossessed farmer receives the reimbursement of his expenses.

None of the tenures of Bengal are secure, except those by which the rent of an ascertained farm, or field, or of a specified quantity of land, is fixed by a lease granted previous to cultivation, for a definite term, or for perpetuity; whether the permanency of it be expressly stipulated; or the lease be framed, as is not uncommon for an indefinite period.

In the other tenures, great confusion has arisen. Measurements long omitted, without a rule of record substituted in their place, and former surveys forgotten, or their rates† become obsolete, leave no certain rule

* It still subsists in countries bordering on Bengal, both to the northward and to the southward of the British dominions. Four oxen are commonly allowed to one plough, and a regulated tax is levied on it.

† The standard for the regulation of rates has been lost. We learn from Mr. James Grant, in his observations on the revenues of Bengal, that the assessment was limited not to exceed

for adjusting the rents. Endeavours are used to obtain from the tenant an undertaking for the current year; but,

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in the whole a fourth part of the actual gross produce of the soil. The antient method of estimating the resources from the produce is explained in the Ayeen Akbery, Vol. I, page 381; see also Vol. II, page 9. In early times, the demands of the Hindu sovereigns were more moderate. The Mahabharata states, that the prince may levy a fiftieth of the produce of mines, and a tenth of the corn. Menu and other legislators authorise the sovereign to exact a sixth, an eighth, or a twelfth, part of grain, according to circumstances, and a sixth part of the clear annual increase of trees, &c. Hindu authors distinguish the cultivator occupying the land in his own right, or cultivating ground belonging to another person, who is become unable to till it, or who has expatriated, or who has removed to other land, from the husbandman, who enters on the farm without permission from the former possessor. In this last case, the prior occupant may redemand the land, and may have the produce, repaying to the husbandman his expenses; or he shall have an eighth annually, for eight years, and at the expiration of that period he may resume the land without repaying the charges. The peasant is to pay the same to the prince as to the former occupant. Other authorities direct, that the husbandman shall pay to the former possessor a tenth of the produce of lands which were waste, and had been so five years; an eighth, for such as had lain three years; and a sixth, if the ground had remained untilled during one year; he was also required to pay an equal amount to the sovereign. The institutes of Akbar inform us, that former monarchs of Hindustan exacted the sixth part of the produce of lands. (Ayeen Akbery, Vol. I, page 347.) Under Akber, the revenue was settled at a third of the produce of lands cultivated for every harvest, or opened after allowing a short lay, in order that the soil might recover its strength; but, for older fallows, much less was required. For example, if the land had been untilled during three or four years, and was greatly injured, the payment in the first year was two-fifths of the standard, or two-fifteenths of the produce; in the second year, three-fifths of the standard; in the third and fourth years, four-fifths: and in the fifth year, the same rate as for land regularly cultivated. The rent of ground, which had been waste, was in the first and second years inconsiderable; in the third year, a sixth of the produce; in the fourth year, a quarter of it; and, after that period, the same as for the land which had been regularly cultivated. These rates were applicable to corn only. Indigo, poppy, &c., were paid for in ready money, at proportionate rates. Vide Ayeen Akbery, Vol. I, pages 356, 361, and 364.

having to dispute arbitrary imposts, he seldom complies. The landlord, estimating the amount of his own wants, distributes it at pleasure on his tenants, and endeavours to levy this assessment. In the confusion of disputed demands, no documents are interchanged; the tenant refuses to accept a receipt because stoppages have been made, which he does not acknowledge to be just; the landlord refuses to grant a release, ever claiming more than he has realised. The confusion increases while the sole object of one party is to extort, and of the other to withhold, as much as possible. Hence arose that scene of violence, which long disgraced Bengal under the native administration, while the peasant was literally subject to the lash of the extortioner.

Weakness will ever oppose cunning to violence. This resource has been very successful in the hands of the peasantry of Bengal. When the power of coercion was taken from the landlord, the tenants had no future oppression to apprehend from the vague tenures by which they held; but they were not willing to relinquish the future gain which they expected to obtain by such frauds as those vague tenures might enable them to practise. When the hands of the landlord were again strengthened, he reverted to the practice of extortion. It is from these causes that little progress has been hitherto made in the adjustment of rents on definite terms, and a long period may yet elapse before they acquire regularity.

Besides the variety of tenures which we have noticed, a difference arises from other circumstances. A tenant, who cultivates the lands of a distant village, cannot be placed on the same footing with one who uses land in the village wherein he resides. Indulgence in regard to his rent is allowed for the purpose of enticing the distant cultivator; and the inconvenience of remote cultivation makes it necessary that he should be at liberty to relinquish at any time the land which he uses; and, consequently, his own continuance being precarious, he cannot have a title of occupancy, which shall preclude the landlord from trans-

ferring the farm to a resident husbandman desirous of undertaking it. Another distinction arises from the practice of tenants under-letting their lands to other peasants. This class of middle men is numerous. Some are authorised by the nature of their tenure where the rent and limits of the farm are fixed and ascertained; others have an express permission inserted in their lease; most have no justification for this practice, which has grown up by abuse, and which is highly detrimental. The under-tenants, depressed by an excessive rent in kind, and by usurious returns for the cattle, seed, and subsistence, advanced to them, can never extricate themselves from debt. In so abject a state, they cannot labour with spirit, while they earn a scanty subsistence without hope of bettering their situation. Wherever the system of an intermediate tenantry subsists, the peasant is indigent, the husbandry ill managed.

Such were formerly the principal known tenures of raiats; but of whom did they hold? This question has been much agitated.

In the unquiet times, which preceded the Company's acquisition of the Diwani, arbitrary power respected neither prescriptive rights nor established usages. The management, first adopted under the British authority, had no tendency to restore order; and, when the servants of the Company undertook to conduct the detail of internal administration, they found the whole system embarrassed and confused.

Anxious to secure for their employers all the available resources of their new acquisitions, but without intending a wrong to individuals, they entered on inquiries with laudable diligence; but it was not rewarded with adequate success in unravelling the intricacies of the revenue by ascertaining local usages; nor in tracing, by a reference to its institutes, the system of administration established under the Moghul government.

These inquiries were suggested by a question, which was early started; "Of what nature was the landed pro-

perty of Bengal? to whom did it belong? and what were the privileges which appertained to other classes?" Various opinions were entertained on these points. Some attributed to the sovereign the lordship of the soil; but restricted this property by admitting that the peasantry, as holding immediately of the prince, had a permanent interest in the land by immemorial usage. Others thought,* that the zemindars enjoyed a proprietary right in the soil of an hereditary nature, and they considered the peasantry as having no positive claim to retain the land, against the will and approbation of the immediate superior. Many could perceive no such right vested in any but the peasant who occupies the soil; they held him to be the natural proprietor of the land, yet bound to contribute to the support of the state, from which he received protection.

In one point of view, the zemindars, as descendants of antient independent rajas, or as the successors of their descendants, seemed to have been tributary princes. In another light they appeared to be only officers of Government. Perhaps their real character partook of both; and they might, not inaptly, have been compared to kings nominated by the Roman republic to administer conquered kingdoms. This, however, must obviously be restricted to rajas who possessed great zemindaris. Numerous landholders, subordinate to these as well as others independent of them, cannot evidently be traced to a similar origin.

In examining this question, it was pre-supposed, that a property in the soil, similar to that which is vested, of right or by fiction, in the sovereign, or in some class of his subjects throughout every state of Europe, must vest in some class of the inhabitants of Hindustan, either sovereign or subject. If it were denied to the zemindar, (a denomination which readily suggested the term of landholder for its equivalent,) the sovereign has been thought the only member of the state to whom that property could be attributed. Besides the presumption arising from the literal interpretation of the name, the hereditary succession

* See Rous on the landed property of Bengal.

of zemindars pointed out these for the real proprietors: and although the succession did not follow the rules of inheritance established by law for landed property, and admitted in practice for real estates of which the revenue had been granted away by Government; and although the hereditary succession to offices of account* was as regular and as familiar as it was to zemindaris; the advocates for the rights of zemindars deemed the argument conclusive, or appealed to humanity in support of it. For, perceiving no competitor but the sovereign for the lordship of the soil, it escaped their observation that the rights of more numerous classes might be involved in the question, and that the appeal to humanity might well be retorted.

These and other arguments were assisted by considerations of expediency, which decided the question, and accordingly the zemindars are now acknowledged as proprietors of the soil. Yet it has been admitted, by a very high authority that antiently the sovereign was the superior of the soil; that the zemindars were officers of revenue, justice, and police; that their office was frequently, but not necessarily, hereditary; that the cultivator of the soil, attached to his possession with the right to cultivate it was subject to payments varying according to particular agreements and local customs; that in general, he continued on the spot, but that the revenue to be paid by him to the state was to be determined by the zemindars;† that the raiat certainly had a title by occupancy, in right of which he might retain the land without reference to the will and approbation of a superior; but subject to contributions for the support of the state. To assess and collect those contributions, regulated as they were by local customs or particular agreements, but varying at the same time with the necessities of the state, was the business of the zemindar, as a permanent, if not as an hereditary,‡

* Canungos.

† View of plans, &c.

‡ *He ought never, then to have had an interest in the decision which was, notwithstanding, universally the case.*

officer. For the due execution of his charge, he was checked by permanent and hereditary offices of record and account. As this corresponds nearly with our own opinion, it is the less necessary to offer argument and proof in support of the sentiments which we entertain.*

In recognising a proprietary right belonging to zemindars, no more can have been iuteuded than to disclaim all pretensions on the part of the sovereign to a property in the soil, not to abridge or annul the rights and privileges of other classes. But uuder the acknowledgment of it, occasion must frequently recur for the particular vindication of every privilege which seems to clash with the property so acknowledged to be vested in zemindars. The succession of occupants will gradually afford to the zemiudars, as land-holders, the opportunity of limitiug the tenures; leasehold farmers will succeed to privileged occupants; and the rights of other classes will be likewise abridged. Perhaps the certainty of stipulated rent may nevertheless be a full compensation for the loss of an indefeasible right of possession.

The rent or revenue, regulated by the tenures which we have described, was not sufficiently certain, and does not iuclude all the direct payments required from the raiats. The intricacy of multiplied demands seems to have been studiously preserved by the natives, because it facilitated frauds and exactions. Many collections of the nature of land-rents were ranked among the sayer or internal duties; established fees and customary presents as well as occasional contributions, were not brought on the register of the revenue, and stoppages were made for special purposes. None of these did, strictly speaking, form a part of the land-revenue; and they have been, therefore, reserved for separate consideration.

The sayer, of the nature of land-rent, consists of ground-rent for the site of houses and gardens, revenue drawn from

* The compiler of a new Digest of Hindu law has examined the question of a property in the soil. His dissertation on this subject is curious but fanciful. See the translation of the Digest, Vol. II, page 62.

it might gratify curiosity, but could answer no useful purpose. The rules were not sufficiently certain; this circumstance, added to the multiplicity of various collections, subjected commerce to undue exactions.

Fees, contributions, and stoppages, require no detailed explanation. It has been already mentioned, that fees were mostly the perquisites of the native public officers; occasional contributions were required for works of general utility; and stoppages were mostly made for charitable purposes, sometimes for official perquisites, occasionally for public uses.

Improvements, benefiting the lands of a single tenant, must be undertaken by himself, on his own account, for his own advantage; such, for example, as hedges, ditches, and wells. For great undertakings of less limited advantage, such as dams and ponds, the tenants interested therein unite in a common concern. But public works of greater magnitude, such as dikes, roads, canals, reservoirs, and bridges must be undertaken by the landlord for the common benefit of himself and of his tenants; or by him, or by some other person, from motives of public spirit. This has been no unusual incentive; and it was formerly deemed unpopular to require repayment; but sometimes the landlord did claim reimbursement by direct payments, and it is equitable he should do so, if the lands, improved by such works, were already let to tenants. In such cases, reimbursement could only be obtained by an immediate subscription, or by an increase of rent; and, in the prevailing tenures, the rents could only be raised by a special tax or contribution.

The contributions and stoppages, which were not applied to public works, were either appropriated to charitable purposes; or, together with fees, supported the native provincial officers. These charitable purposes included the maintenance of helpless poor, with the support of priests and mendicants, and the endowments of temples and colleges. Besides established contributions in money, or in kind, levied on the authority of patents, or of the written consent of the inhabitants, and besides allowances paid out of

stoppages made upon a similar authority, the revenue of districts was charged with pensions and customary alms; or it was partly alienated as a fund for these purposes. The public officers had also a provision in free lands, besides the allowances charged on the revenue, and besides the fees and perquisites received from the people.

Numerous are the distinctions of such allowances, according to the periods of payment, the form in which they were levied, or the fund whence they issued, the appropriation of the pension, or the motive from which it was granted, all these constitute a useless nomenclature undeserving the attention of such as are not compelled by official duty to learn those terms.

Free lands are likewise distinguished, according to their appropriations, for Brahmens, bards, encomiasts, ascetics, priests, and mendicants, or for a provision to the several public officers,* or they were described by terms of a general import, used in a restricted acceptation. These, also, it would be superfluous to specify, one, however, merits attention, as it throws some light on a general subject

The seishieen was held upon a patent granted by an officer of the state, but that patent was grounded on the written consent of the inhabitants of the district, who agreed to make good among themselves the revenue of the lands so alienated To understand this, it is necessary to advert to the record† of the assessment as distributed on the villages, which was formed at an early period under the

* It deserves notice, that the provision in money and in kind, for zemindars and canungos, bore the same denomination (Nanceu). If the zemindars had been proprietors of the soil paying a fixed land tax, why had they a provision? or, if they were not officers, like canungos, why did their provision bear the same denomination?

† First formed by the celebrated Raja Toder Mull. He did not live to complete it for the whole of Bengal proper In this province the *Jucsim* of the *Tumar* was finally formed at a modern period. The *Jucsim* of the *Juma* in dams was completed in Akber's reign

Moghul government, and by which the collection of the revenue was regulated When lands were granted by the sovereign, the revenue was alienated according to this record, and it was transferred, together with the lands, from the revenue office to the grand almoner's or the vizir's register, according as it was appropriated for charitable and religious uses, or for civil and military purposes There it became a permanent fund* applicable to these purposes, at the disposal of the sovereign, through the channel of those offices, whenever the land lapsed or escheated The subordinate officers of government, consequently, had not the power of alienating the revenue of lands, but, to make grants, they had recourse to the expedient of obtaining the consent of the inhabitants of the district to assess on their lands the recorded revenue of the ground intended to be granted away, and, as the record carried the distribution no farther than to the village, they assumed the power of granting any smaller portion of waste land, without the acquiescence of the people or the sanction of government, such grants would be the most frequent form of alienation, as the general consent to a serishteen might not easily be obtained Accordingly, the greatest part of the present free lands of Bengal proper were originally granted in small portions of waste ground The recorded revenue of few entire villages has been alienated In the confusion which intervened between the decline of the Moghul and the rise of the British influence in Bengal, some entire villages were indeed granted by the subadars and their subordinate officers, and they also disposed of lands belonging to the alienated fund But, as the Moghul reserved the revenue of Bengal proper for the royal exchequer, and never assigned in this

* The pecuniary allowances also formed a fund out of which the sovereign made grants, but the subordinate officers had more influence in the disposal of these allowances than in the distribution of alienated lands the general fund of the province was increased by any new grant made by a competent authority, or many separate funds were established by the assignment of allowances on the land and sayer revenues of districts and villages, [illegible] grants [illegible] etc

province any lands for the civil and military fund,* and little for charitable uses, few very large tracts are now exempt from revenue, and most of the untaxed estates are too inconsiderable to employ many tenants.

The more extensive tracts of free lands are managed in the same mode as estates assessed for revenue. The system of management, which anciently prevailed in such estates, requires explanation. Every village was superintended by an officer or public servant, whose business it was to assign land to new settlers and to receive the rents of the occupants, by whatever rule they were adjusted; and in this he was checked by another officer, who was bound to keep a register of every payment and a record of every transaction, as well as to prepare accounts of the revenue due from each occupant, according to agreement or usage, and generally to conduct all the business in which writing is requisite, while the officer first mentioned performed the duties of a land-bailiff. But the signature of both was necessary to the authenticity of every document, whether it was a lease, a receipt, or acquittance, or any other adjustment of account. They were not however amenable to the same superior; the one was subordinate to the general office of record for the whole district, the other was accountable to the person entitled to receive the revenue. The canungo, who held the office of record now alluded to, kept a register of every revenue-transaction and of every regulation of government, together with a record of usages of the district. He was a check on the officers of revenue; and the control may have been effectual, so long as he had the nomination of the accountants employed in each village. But, though the canungo in some provinces long continued to be consulted in the nomination of the accountants, these became officers of the collections, and the canungo's control, in fact, ceased from the time when the system of farming the revenue was generally introduced.

* Excepting only the provision in land for officers, who were employed in the immediate administration and protection of the province itself.

Hence arose that habitual breach of faith, the remains of which are yet perceivable. The general disregard of usage and agreements rendered the offices of account and control useless and nugatory. Their authority has never been restored.

When government turned its attention to check these abuses, and, without discontinuing a farming system or relinquishing a high revenue, endeavoured to regulate the conduct of the farmers and to enforce a strict adherence to all existing engagements with occupants and cultivators, the farmers, thus controlled in their avowed oppressions, had recourse to indirect methods. Favouring a few leading cultivators, they obtained, through their influence, general agreements to authorise exactions and imposts. Peasants became farmers of revenue, with the view of granting, on their own authority, reductions in the rent of the lands occupied by themselves; and continued to farm the revenue that they might perpetuate their undue advantages. The peasants at large were discouraged by an unequal assessment: and the favoured few did not use to the best advantage the lands which they held, but formed that class of intermediate tenantry, which has been already mentioned in another place.

It would be endless to describe all the abuses which had grown up; they were so numerous, that the permanence of the present tenure is insufficient to excite the landlord to the arduous undertaking of rectifying abuses, and of regulating the rents; discouraged, as he is, by the difficulty of discriminating the just rights of the tenantry from their collusive advantages, and controlled by the litigiousness of tenants, who contest every point and avail themselves of every artifice which the forms of judicial proceedings can permit them to practise.

The farming-system, though adopted by the proprietors of free lands, was not pursued to such excess; of course it was not followed by the long train of ill consequences which we have now indicated. Having a permanent interest in the land, and being under no necessity of levying a specific

sum, whether the tenants could afford it or not, the proprietors of free lands had not the same inducements to rack-rent their estates which those had who were bound for definite payments, either as zemindars or as temporary farmers.

The renters of free lands, engaging for a moderate revenue proportioned to the dues which are regularly demandable from tenants, were not led to the same violent or to the same indirect methods of oppression; nor did similar abuses arise from the successful resistance of cunning against power. The rents of the tenants continued less intricate and less unequal. The average assessment might, perhaps, differ little; but it was not so unequally distributed, and consequently the peasantry at large was not so much depressed.

This is confirmed by a comparison with tracts of land, for which renters had obtained perpetual leases, whether they were themselves zemindars of the district or farmers only of the land which they held. Though not originally assessed lower than other estates, yet, having become a permanent possession, before the long continuance of the farming system had introduced all the abuses which have been described, they retained the advantage of an equal and uniform assessment.

Among the lands assessed with revenue, the condition of large zemindaris was more deplorable than that of smaller estates. The zemindari of one individual* formerly comprehended thirteen thousand square miles. Several others, too, were very extensive. Many were too great to be wholly superintended by the owners themselves. At the same time the magnitude of the sum, which a proprietor was bound to pay, deterred him from delegating the superintendence to irresponsible servants. He was willing to divide his risk by under-letting his estate to farmers; and he preferred this management, which was sanctioned by modern practice, to the bolder attempt of regulation and reform, which, from the long prevalence of abuses, would

* The zemindar of Rajshahi.

assume the appearance of innovation and hasardous experiment. The same considerations must have had some influence with the proprietors of smaller tracts of land; but, having their whole property within the reach of their own superintendence, being minutely acquainted with the circumstances of every part of the estate, if they did not altogether disuse the practice of under-farming, they at least exercised judgment in the conduct of it, and mostly gave some attention to the remedying of abuses.

If considerations of general welfare ought to supersede our feelings for the loss sustained by individuals, the dismemberment of large properties might be deemed a fortunate circumstance. Measures, tending to encourage the sub division of landed estates among heirs, according to the common laws of inheritance, are for the same reason well judged and consistent with good policy, but this must be taken with some limitation

An inferior and subordinate class of proprietors hold petty estates In the western provinces, where the office of the first receiver of rents* has in some instances become hereditary, the class of inferior proprietors may have had its origin in the admission of heirs to succeed to the subordinate offices of collection under the zemindar. But this cannot be the origin of the petty properties which are common in the eastern districts of Bengal. These tenures seem rather to have been an extension of the rights of occupants, from vague permanence, to a declared, hereditary, and even transferable, interest They all bear a fixed quit rent for portions of land which are to be inherited in regular succession; and some were understood to authorise the transfer by sale or donation, and consequently conferred every right which constitutes a real property. others, not compatible with alienation by sale or gift, formed an imperfect and dependant property, which, nevertheless, was inheritable in regular succession. But both, by abuse, become liable to a variable assessment, in common with the lands of other occupants. The un-

* The mukkedem or mundil.

transferable but hereditary properties still, however, remained a little superior to the common right of occupancy, because this ceased with possession, whereas the hereditary title authorised the taallukdar or his heir to resume possession, though his actual occupancy might have been interrupted.

These dependant taalluks (for so they are generally called) were rated to the assessment of the village as it stands on the record already mentioned; at first the object was a specification of the revenue to be paid; afterwards it only became a designation of the property: in the intermediate period it served to regulate their actual assessment by adding the new taxes to the recorded rent, in the same proportion at which their superior zemindars were rated. The alienable properties above mentioned comprehend nearly the whole of the estates, which have been separated under the name of taalluks,* from the jurisdiction of superior landholders; while the other tenures, which we have mentioned as likewise prevailing in the eastern districts, continue subordinate to the zemindars; but in both the assessment has long ceased to be regulated by any certain rule. Many dependant taallukdars have, nevertheless, preserved the benefit of a quit-rent fixed in perpetuity.

Estates, which were originally small being subdivided according to the rules of inheritance fixed by the Hindu or by the Muhammedan law,† soon split into minute portions

* Some taalluks seem to have been the zemindari tenure subdivided; others, not entitled to be deemed independent, were no better than permanent leases of land held in farm.

† Estates of Mussulmans are more rapidly subdivided than those of Hindus. The law of family partnership generally preserves the unity of the estates held by Hindus. This, however, is not the most material difference. The Hindu law divides property in equal shares among heirs of the same degree, but without commonly admitting the participation of females. In general, these only inherit in default of male heirs. The Arabian law assigns to several relations their specific portions as allotted by the Koran; and divides the remainder of the inheritance among the residuary heirs; giving equal shares to all males of the same degree, and half the portion of males to females in the same degree of consanguinity.

so inconsiderable, that the public accounts exhibit independent taallukdars assessed with an annual revenue of a few penoe ; yet the heirs, attached to their possessions, often limit their industry to their paltry estates ; or even content themselves indolently with attempting to maintain, on the income of a subdivided patrimony, the unprofitable idleness of an opulent predecessor. Industry must be unsuccessful where it is limited to force the maintenance of a family from an inadequate portion of land. Petty possessions are almost an irresistible inducement to this unprofitable diligence ; but sufficient security in leasehold tenures, and the experienced advantage of larger farms, ought to induce petty proprietors to extend their industry beyond the limits of their own estates. As for idle indigence, it ultimately finds its own remedy, though at the expense of population. Meantime the more numerous any class of unprofitable citizens becomes, the greater is the present evil. The justice and policy of limiting the subdivision of landed property may be questioned; but certainly it should not be encouraged to a minute degree of subdivision.

It may even be doubted whether subdivision of property in arable land be not an evil, though it were not carried farther than may leave estates of sufficient magnitude to afford to the proprietors a humble subsistence. The Indian landholder is too much disposed to rest satisfied in the indolent enjoyment of the produce of his land; neither applying himself to husbandry on his own estate, nor to any other occupation whence he might derive some aid to his small income. Straiteued in his circumstances, he exacts the utmost rent from his tenant. Greater proprietors, unless impelled by the difficulties of an excessive contribution to the revenue, might pursue their own interest in allowing favourable terms to their tenants. A class of wealthy citizens contributes to the prosperity of the state by their encouragement of elegant arts and improvement of the mechanic powers ; though the surest token of a thriving nation is certainly found in the consumption of superfluities by the people at large, when affluence permits the general use of more than the mere necessaries of life.

But the consumption and use of mere food and apparel, by a set of idle and indigent landholders, contributes nothing to general prosperity, it shows only an unprofitable population. This class of needy proprietors is numerous in Bengal. But even the greatest landholders are not in a situation to allow that indulgence and accommodation to their tenants which might be expected on viewing their income. Responsible to government for a tax originally calculated at ten-elevenths of the expected rents of their estates, they have no probable surplus above their expenditure to compensate for their risk. In any, the greatest, calamity, a moderate tax must leave to the proprietor some income. On the contrary, a common evil must bear down him who is assessed with ten-elevenths, or even with three-quarters, of his receipts. Any calamity, any accident, even a delay in his recoveries, may involve a zemindar in difficulties from which no economy nor attention can retrieve him. He is not, therefore, likely to be an indulgent and forbearing landlord.

From this view of the condition of landholders, we are led to the consideration of the circumstances of tenants; and to inquire whether the gross produce of the lands sufficiently rewards the labour employed for its production, and in what degree of ease it supports the classes who subsist by their industry. The opulence of the commonalty constitutes the wealth of the nation, and the country may be deemed flourishing in proportion as the peasants are in an easy condition. Their general mode of life, compared with what may be deemed reasonable wants, will show whether the people at large are well or ill supported; considering, at the same time, the reward of labour to determine whether voluntary abstemiousness or real poverty debar them from a fuller gratification of their wants. But, since the earnings of country-labour cannot be treated of separately from the detail of husbandry, we shall resume that subject.

and of which the cost is very trifling. Twenty labourers may weed a bigah in a day. For transplanting, the daily allowance and the labour performed are nearly the same as for weeding. No tool is required for transplanting rice, the whole operation being performed by the hand; but, for other cultures where a tool is requisite, an implement resembling a hoe on a long handle, or one like a chisel, also on a long handle is employed. For hand-hoeing, the large hoe, which in Bengal serves the purpose of a spade, is employed. It is wide and curved, and set on the handle at an acute angle: this compels the labourer to stoop much in working. The same tool serves for clearing of old lays preparatory to opening them with the plough, and for other purposes for which a spade would be useful. The pay for digging, and generally for all country labour, is regulated by the same allowance of two to three sers per diem, as above-mentioned. But reaping is generally performed by contract, the reapers being hired at a sheave in sixteen, or, if they also carry in the harvest, at a sheave in eight; and the whole expense of gathering the harvest may be paid with one measure of grain in six, which provides for the labour of reaping, carrying, winnowing, measuring, and storing, the crop. The thrashing is not included; for corn is not usually thrashed, but is trodden out by the cattle of the farm.

Though rice and pulse may find a market in the husk, and the task of cleaning rice and splitting pulse generally fall on the first purchaser; yet, not unfrequently employing the peasant's leisure, it may be counted among the labours of the cottage. It is executed with a wooden pestle and mortar; or the rice is cleaned under a beater of very simple contrivance, worked by a pedal. When the husk has been removed by long beating upon the dry rice, such grain is preferred for home-consumption. If previously scalded, it is better adapted for preservation, and has been therefore more approved in foreign commerce. As the expense of fuel is nearly equal to the economy of labour, the allowance for husking rice is almost uniform at a con-

tract to return, in clean rice, five-eighths of the weight delivered in the husk. The surplus, with the chaff or bran, pays the toil.

We shall not have formed a just notion of the reward of country labour, without comparing the price of it to what is gained by a cultivator, who delivers half the produce in lieu of rent: in this comparison it will be unnecessary to notice the small deductions usually made before partition. Some are favourable to the cultivator, because they defray a part of his expenses; others unfavourable, because they are taxes for the measurement of the produce, or for religious appropriations. The advantage and disadvantage are perhaps nearly balanced, and we consider him as obtaining no more than an exact half of the produce to reward his labour and defray his expenses.

Ten mans of rice are a large produce from one bigha, and a return of fifteen for one:

Cultivator's share . . Mans				5	0	0
Seed which the proprietor of the land had advanced, and which is repaid to him with 100 per centum by way of interest	0	26	10½			
The labour of reaping, &c., at the rate of a sixth of the whole crop	1	26	10½			
Ditto weeding twenty days at 2½ ser	1	10	0			
				3	23	5
				1	16	11
Ditto husking with the wastage at three-eighths,				0	21	4
				0	35	7

thirty-five sers and seven-sixteenths of clean rice, at the average rate of twelve anas for the man, are worth eleven anas nearly; and this does not pay the labour of ploughing, at two anas per diem for eight days. It appears, then, that the peasant, cultivating for half-produce, is not so well rewarded for his toil as hired labourers; and it must be far-

ther noticed, that he is under the necessity of anticipating his crop for seed and subsistence; and of borrowing for both, as well as for his cattle and for the implements of husbandry, at the usurious advance of a quarter, if the loan be repaid at the succeeding harvest, and of half, if repaid later: we cannot then wonder at the scenes of distress which this class of cultivators exhibits, nor that they are often compelled, by accumulating debts, to emigrate from province to province.

It is obvious, that, where the produce is greater in proportion to the seed and to the quantity of land, the sum of labour remaining the same, this partition of crop may leave to the peasant a sufficient payment for his toil; on the other hand, where it is less, it may be absolutely unequal to afford the simplest necessaries. This is so true, that, in most lands, cultivation for this proportion of the crop is utterly impracticable. We therefore took a higher produce and estimated less labour than the general average would have suggested to us. But this must be now noticed, together with the requisite return of profit on the outlay, to compare the average-produce with rents paid in money.

In the husbandry of corn and small grains, it has been already stated, that a considerable proportion of the land yields several crops within the year: much indeed yields only one; but, on the other hand, the practice of crowding crops seems ill judged, and it returns less in proportion to the labour and expense than successive cultivation. We may therefore assume, as the middle course of husbandry, two yearly harvests from each field; one of white corn, and another of pulse, oil-seed, or millet. Not that, on a medium, land does actually produce two annual crops, but the greater expense of cultivating two separate portions, for their respective harvests, at two different seasons, is nearly compensated by the profit of obtaining, in some instances, more than two crops from the same field, where circumstances permit; at the same time, the quantity of ground, which is actually used, is more than would be required if all land uniformly yielded two harvests

A plough, with the usual yoke of two or three pair of oxen assigned to it, is equal in common management to the full cultivation of fifteen bighas of land and the expense, estimated at twenty-two rupiyas eight anas, averages one rupiya and a half for the bigha.

Ploughman, at one rupiya per mensem ...	Rs.	12	0
Allowance to the headsman, (say for five oxen, at half an ana each,) two anas and a half per mensem, or, per annum		1	14
Pasture, two anas a head, annually		0	10
Interest on thirty rupiyas, the cost of the cattle, and on two rupiyas, the cost of the plough and other implements, at two per centum per mensem, including the wear and tear of the plough, and the replacing of cattle		8	0
		22	8

On the medium assumed of the two crops per annum, the produce may be taken at seven mans of rice in the *husk, and three and a half mans of pulse or other grain* gathered at the second harvest.*

* In the first volume of Gladwin's Translation of the Ayeen Akbery, page 356, is a table of the mean produce of such land as is regularly cultivated It is calculated on the medium of three years. To compare this with our estimate may be curious.

The bigha noticed by the Ayeen Akbery contains 3,600 square Ilahi Guz, and the man consists of forty sers, each ser weighing thirty dams. The bigha, for which our estimate is formed, contains 1,600 square yards, and the man consists of forty sers, containing eighty sica weight: 3,600 Ilahi Guz are equal to 3,025 square yards; and thirty dams to forty-three sica weight.

	Produce of a bigha of 3,600 Ilahi Guz, in mans and sers of 30 dams.			The same produce reduced to the bigha of 1600 square yards, in mans of 80 Sa. Wt. to the ser		
Clean rice, average of three sorts ...	16	33	0	—	4	35
Wheat and barley	12	38	8	—	3	30
Pease, chiches, vetches, and other pulse, average of eight kinds	7	8	0	—	2	0
Millet, average of two kinds	9	27	0	—	2	35
Seeds, yielding oil, average of three kinds	6	16	0	—	1	35

Seven mans, equal to four mans and fifteen sers of clean rice, at 12 anas ...	Rs.	3	4½
Three and half mans, at 10 anas		2	3
		5	7½
Seed repaid, a twelfth ; and expense of reaping, &c., a sixth		1	6
Labour of sowing, weeding, &c., equal to two weedings, or forty day-labourers, at two and a half sers 2 ms. 20 srs. at 8 anas		1	4
Labour of cattle for the plough, &c. ...		1	8
Rent, a fourth of the gross produce, including all payments to the landholder or his officers ...		1	6
		5	8

The peasant, consequently, does not derive from corn-cultivation the very humble maintenance which we suppose, unless his family share in the labour for which we calculate him to pay, or apply their leisure to other occupations, or, unless we take into account the profit drawn by him from the land which he underlets to his ploughmen at half-produce. In fact, it is not upon the cultivation of grain that the peasant depends for his profit or even for his comfortable maintenance. In grazing-districts it is the dairy, in others it is the culture of some more valuable produce, which aids the husbandry of corn. In districts, where cattle abound, the occupying of arable-land is necessary to entitle the peasant to pasture in the forest and on the downs a proportionate herd of cattle: in other provinces, corn, though not equally profitable with dearer articles, serves to alleviate the risk attending the cultivation of them : for, they seem precarious in exact proportion to the greatness of the profit which they are expected to afford. On the failure of his mulberry or his sugar-cane, the peasant, had he no corn, must suffer the extremities of want ; but, raising in that and other grain a sufficiency for mere subsistence, he can wait the supply of his other wants from the success of other culture; or, he can reserve a hoard

from the crop of a successful year to meet the difficulties of one that is calamitous.

The price of corn, which, in Bengal, fluctuates much more than in Europe,* has a considerable influence on the value of most other articles, though it cannot regulate the price of all.† When the demand for any one of them is limited to few persons as it is under a commercial monopoly, the purchaser is enabled to fix his own price. That of raw opium, for example, is regulated by Government; and the purchase of silk also is almost entirely in the hands of the Company's agents. This circumstance gives uniformity to the price of the raw material. The value of all such articles must then be nearly uniform; at least their price cannot be affected, but distantly by the abundance of the rice harvest.

A peasant, who should place his principal dependence on the culture of such productions, must experience absolute want if he sell a scanty crop at no higher rate than abundant harvests at the same time that corn bears a very advanced price; but so long as he sows a sufficient proportion of land with corn, he cannot be destitute of food, whether the price of grain be high or low. From this and other culture he can seldom fail of being also enabled

* Without famine or scarcity we have known corn four times dearer at the first hand in one year than in the preceding. In a cheap district, rice in the husk sold, one season, as low as eight mans for the rupiya. In the following year it was eagerly purchased at the rate of a rupiya for two mans.

† When the crops of corn are very abundant, it is not only cheap, but wants a ready market. As the payments of rents are regulated by the season of harvest, the revenue is due, and must be paid, whether there be or be not a vent for the produce. To meet the demand of rent, and to provide for other disbursements which the tenant has immediate occasion to make, he must dispose of other more saleable produce, and even anticipate the harvest of it. Thus the eagerness of the vendors reduces the price of other articles in consequence of corn wanting a ready sale. For some such reason the price of corn seems to have a greater influence on the general market in Bengal than in other countries.

to discharge his rent, though he may be much straitened for the supply of his various wants, over and above a bare subsistence.

But the profits of cattle are less precarious, they consist in the increase of stock from kine and in the milk of buffaloes Cows are usually fed near home, on reserved pastures, or on the waste lands of the village buffaloes needing more nutriment, and thriving on rank vegetation do not find sufficient pasturage in populous districts The herds of this sort of cattle are most numerous in the north-ern and western provinces, where, in the rainy season, they find pasturage on downs which are never submerged, and, in the dry season, on forest lands, which are mostly inundated during the rains But many herds of buffaloes travel in the dry season into the vast forests which border on Bengal

Cattle are grazed at a very small expense It does not exceed eight anas a head annually for buffaloes and four anas for cows A herdsman, hired to attend fifty cows or thirty buffaloes, at wages in grain, money, and clothes, amounting to one rupiya and a half per mensem, (or less, if the average be taken in grazing-districts only,) does, in fact, receive an ana for each cow, and less than one ana for each buffalo, but this average, which has been computed for all Bengal, is higher than the usual rates in grazing-districts; the whole annual expense, incident to stock, cannot there exceed seven anas for each buffalo and three anas for each cow

The profits of the dairy arise from the sale of milk, of curds in various forms, and of clarified butter As the last is the only produce which admits of being transported to a distant market, we calculate the profit as if the whole milk underwent this preparation The buffalo cow daily supplies the dairy with two to three sers of milk. Upon an estimate of milch kine, in the proportion of two-thirds of the whole herd throughout the year, the annual produce is nearly fifteen mans of milk for each cow The dairy man will contract, without wages, to deliver two sers and

a half of clarified butter for a man of milk At this rate, the owner of the herd should receive thirty seven seers and a half of clarified butter for fifteen mans of milk, and may dispose of it for seven rupiyas and a half, out of this, a deduction must be made for the transport from the dairy to the market, since, the cattle being usually grazed in wild countries, the temporary hut, which serves for a dairy, is remote from the market. This, however, with the expenses estimated at seven anas a head, will hardly reduce the annual profit much below seven rupiyas for each buffalo cow, or thirty-five per centum on the capital, if we justly value each buffalo at twenty rupiyas, and suppose that the increase of stock fully compensates for the loss by mortality and accident. We make no account of the few male calves reared for sacrifices nor of those reared for labour, because buffaloes are rarely employed for burden or in the labours of husbandry within the limits of Bengal proper The profits of kine, by the increase of stock, bear nearly the same proportion to the capital which is employed in the purchase of the herd. They certainly amount to thirty per centum

Cattle constitute the peasant's wealth, and the profits of stock would be greater, did the consumption of animal food take off barren cows and oxen which have passed their prime This, indeed, cannot happen where the Hindus constitute the great mass of the general population, since they consider the slaughter of kine and the eating of cows flesh as sinful But many tribes of Hindus, and even some Brahmens, have no objection to the use of other animal food At their entertainments it is generally introduced, by some it is daily eaten, and the institutes of their religion do require that flesh should be tasted even by Brahmens at solemn sacrifices, forbidding, however, the use of it unless joined with the performance of such a sacrifice. Daily practise, however, is not governed by rules of limited cogency, and meat, (mutton and goat's flesh,) being more than double the price of vegetable food, it cannot be afforded as a common diet upon the usual earnings of

labour. Whether this circumstance has much influence, or whether entire abstinence from animal food be not rather ascribable to the prevalence of superstitious prejudices, may be questioned. Probably both have influence, though the latter has the greatest. From whatever cause it arise, the consumption of animal-food is not so considerable as to render the stock of sheep an object of general attention. Their wool supplies the home-consumption of blankets, but is too coarse, and produces too small a price to afford a large profit on this stock.

The orchard is what chiefly contributes to attach the peasant to his native soil. He feels a superstitious predilection for the trees planted by his anoestor, and derives comfort and even profit from their fruit. Orchards of mango-trees diversify the plains in every part of Bengal. The delicious fruit, exuberantly borne by them, is a wholesome variety in the diet of the Indian, and affords him gratification and even nourishment. The palmyra abounds in Bihar; the juice extracted, by wounding its summit, becomes, when fermented, an intoxicating beverage, which is eagerly sought by numerous natives, who violate the precepts of both the Hindu and Mahomedan religions by the use of inebriating liquors. The coco-nut thrives in those parts of Bengal which are not remote from the tropic; this nut contains a milky juice grateful to the palate, and is so much sought by the Indian, that it even becomes an object of exportation to distant provinces. The date-tree grows every where, but especially in Bihar; the wounded trunk of this tree yields a juice which is similar to that of the palmyra, and from which sugar is not unfrequently extracted. Plantations of areca are common in the centrical parts of Bengal, its nut, which is universally consumed throughout India, affords considerable profit to the planters. The bassia thrives even on the poorest soils, and abounds in the hilly districts; its inflated corols are esculent and nutritious, and yield by distillation an intoxicating spirit; and the oil which is expressed from its seed, is in mountainous countries a common substitute for butter.

Besides these, which are most common in the several provinces of Bengal, other trees are planted, but more sparingly, and that for the owner's use only without any view of profit. The various sorts of useful trees, which either grow wild or thrive with little care, are too many to be enumerated in this place. But we must not quit the subject of plantations without remarking that clumps of bambus, which when once planted, continue to flourish so long as they are not too abruptly thinned, supply the peasant with materials for his buildings, and may also yield him profit.

After this hasty sketch of the husbandman's pursuits, it may be proper to notice more fully such productions of the soil as are the chief objects of the merchant's attention in Bengal.

The valuable articles of sugar, tobacco, silk, cotton, indigo, and opium, being the principal dependence of the peasant for the supply of conveniences and for accession of wealth, are well deserving of particular consideration. Deriving a farther importance as they are the objects of external commerce, each would separately merit the amplest detail, both in regard to the present management of them and to the traffic which is carried on. But precluded from undertaking the disquisition in the whole extent which the subject embraces, we may be contented with hasarding on each topic such observations as seem most material.

Opium, it is well known, has been monopolised by Government. It is provided in the provinces of Bihar and Benares, and sold in Calcutta by public sale. For many reasons this monopoly seems less exceptionable than any other. It is doubtless a rational object of policy to discourage the internal consumption of a drug, which is so highly pernicious when employed for intoxication. It must not, however, be concealed, that, by the effect of the monopoly, Bihar has lost the market of the western countries, which formerly were thence supplied, but which now raise as much as is consumed within their limits, and even

furnish some opium to the British provinces Nevertheless, if the first grower receive, from the monopolist, as equitable payment as the competition of free trade could afford him, the monopoly cannot be deemed a public injury, it only takes, for the benefit of the state, what otherwise would afford gain to a few intermediate traders

When the drug was provided by contract, the price paid to the first grower was regulated by the contract made with Government The contractor gave advances to such peasants as were desirous of undertaking the culture, and received the raw juice of poppy at the rates fixed by his contract On a medium of these rates adverting to the quantity which may be estimated on each the raw opium appears to have been bought at the price of one rupiya for ten sixteenths of a ser, or for one pound and a quarter nearly

A learned and very ingenious inquirer* estimated the produce of one acre at sixty pounds of opium, but we think he must have been misled by the result of trials on very fertile land in a fortunate season Such information as we have been able to obtain, has led us to estimate little more than four sers or eight pounds of opium from a bigha reduced to the standard of four cubits of the pole, or forty yards to the rope, and the cultivator also reaps about seven sers of seed, which may bring eight anas, if sold for food, or for the oil that may be expressed from it

This produce, from a plant which requires a good soil well manured, is by no means equal to the production of similar soils whereon other valuable plants are raised At the same time it requires more labour and attention and, in fact, that it is less profitable is apparent from the circumstance of the peasants not ambitioning this culture, except in a few situations which are peculiarly favourable to it. In other places they either engage with reluctance,

* Dr. Keir.

or from motives very different from that of the expectation of profit.*

Many cultivators obtain from the same land a crop of pot-herbs, or some other early produce, before the season of sowing the poppy. It is reckoned a bad practice: whether it be so or not, the labour of the culture is not diminished by having taken an early crop. The land must in either method be thoroughly broken and pulverised, for which purpose it must be ploughed twelve or fifteen times; this work is succeeded by that of disposing the field for irrigation: several weedings, a dressing of manure, and frequent watering, employ much labour; but the most tedious occupation is that of gathering the opium, which, for more than a fortnight, employs several persons in making incisions in each capsule in the evening and scraping off the exuded juice in the morning. If the greater labour be considered, the produce of a bigha of poppy, reckoned at seven rupiyas eight anas, is not more advantageous than the cultivation of corn: even computed at sixteen rupiyas, according to the estimate of produce above quoted, still it is less profitable than sugar-cane and mulberry.

But, in the culture of opium, there are circumstances which may, and which, in some places actually do, render it alluring. In estimating the medium produce, we adverted to the accidents of season, to which this delicate

* To obtain, by accepting advances, an immediate supply of money when urgently wanted, or for the aid and countenance of the agent or contractor, if they have any point to contend or litigate with their landlord. It may be likewise noticed, that the contractors formerly held the peasants bound, if they planted poppy one season, to continue to do so in the following year. When this point was decided against the contractors, they required that a peasant, who relinquished the culture of opium, should resign the land, on which he had formerly planted poppy, to any other peasant willing to engage for the production of opium. It is obvious, that this also must operate as very effectual means of compulsion. The system of contracting for the provision of opium has been wisely abandoned.

plant is particularly liable from insects, wind, hail, or unseasonable rain. The produce seldom squares with the true average, but commonly runs in extremes : while one cultivator is disappointed, another reaps immense gain ; one season does not pay the labour of the culture, another, peculiarly fortunate, enriches all the cultivators. This circumstance is well suited to allure man, ever confident of personal good fortune.

The preparation of the raw opium is under the immediate superintendence of the agent or of the contractor. It consists in evaporating, by exposure to the sun, the watery particles, which are replaced by oil of poppy-seed, to prevent the drying of the resin. The opium is then formed into cakes, and covered with the petals of the poppy ; and, when sufficiently dried, it is packed in chests, with fragments of the capsules from which poppy-seeds have been thrashed out.

This preparation, though simple, requires expert workmen able to detect the many adulterations which are practised on the raw juice. The adultoration of prepared opium is yet more difficult to discover. It has been supposed to be commonly vitiated with an extract from the leaves and stalk of the poppy, and with gum of the mimosa; other foreign admixtures have been conjectured, such as cow-dung, gums, and resins, of various sorts, and parched rice.

The facility of adulterating opium, and the consequent necessity of precautions against such frauds, are circumstances which would justify the monopoly, were it even objectionable on other considerations. In a free commerce, the quality might probably be more debased to the injury of the export-trade. This subject we shall have occasion to resume.

Tobacco, it is probable, was unknown to India, as well as to Europe, before the discovery of America. It appears, from a proclamation of Jahangir, mentioned by that prince in his own memoirs, that it was introduced by Europeans into India, either in his or in the preceding reign. The truth of this is not impeached by the circumstance of the

Hindus having names for the plant in their own language; these names, not excepting the Sanscrit, seem to be corrupted from the European denomination of it, and are not to be found in any old composition. However, the practice of inhaling the smoke of hemp leaves and other intoxicating drugs is antient and for this reason, the use of tobacco, when once introduced, soon became general throughout India. The plant is now cultivated in every part of Hindustan.

It requires as good a soil as opium, and the ground must be as well manured. Though it be not absolutely limited to the same provinces, its culture does prevail mostly in the northern and western districts. It is thinly scattered in the southern and eastern provinces. In these, it is seldom seen but upon made ground; in those it occupies the greatest part of the rich land, which is interspersed among the habitations of the peasantry.

The culture is laborious, as it requires the ground to be thoroughly broken by repeated ploughings. The tobacco, though transplanted, needs one or two weedings and a hand-hoeing. It is frequently visited by the labourer to nip the heads of young plants, and afterwards to pick off the decayed leaves. But the crop is gathered with little labour, and the drying of the tobacco does not employ much time: for it is dried by simple exposure to the open air, either on beds of grass or on ropes; it is, however, removed under shelter during the great heat of the day and the heavy dew of the night.

The whole expense of the culture, upon an average of the districts where it most prevails, and which are among the cheapest of Bengal, does not exceed four rupiyas per bigha, although land, appropriated for tobacco, be rated at a high rent. The produce, estimated at five and a half mans from a bigha of the standard of four cubits to the pole, and this quantity, valued at one rupiya per man, shews tobacco to be a very profitable culture. Accordingly it is eagerly pursued, although the cultivators do not acknowledge so large a profit. Upon the result of direct

inquiries, we might have stated the produce at no more than three mans and a half, and the actual disbursements for labour and rent were estimated on the same information at two rupiyas and a half. But, when this was compared with other less laborious cultivation, the expense seemed greatly under rated At the same time we were led by small trials to doubt the information which we had received respecting the produce. An accident, affording the opportunity of ascertaining the quantity of tobacco actually obtained from a considerable quantity of land, suggested the correction which has been adopted by us

Though it require an excellent soil, tobacco might be produced in the greatest abundance to supply the consumption of Europe Raised, cheaply, it would yield a considerable profit to the exporter upon moderate freight. Small experiments have been made Of their success we are not accurately informed, but we have reason to suppose, that the tobacco of Bengal was not of the quality or had not the preparation which are desired by the European consumer Yet it cannot be doubted, that, under the immediate direction of persons sufficiently acquainted with the quality that is preferred in foreign markets, tobacco might be raised to suit them at no greater expense than in the present management and, if it were provided purposely for exportation, it would be invested with a less advance on the original cost, than it can have been yet procured at a market remote from the place of growth, after passing through the hands of intermediate dealers, who trade on small capitals, and who, therefore, need large profits.

Tobacco might be shipped at the rate of three current rupiyas and a half, or (including every charge for duties and agency in Calcutta) at less than four current rupiyas for a man. The best tobacco bears a greater but arbitrary value, the worst, on the contrary, costs much less we take the usual price of a middle sort, and suppose that it can be shipped at that rate, and that it could support a

competition with the ordinary kinds imported into England from North America.

One ton, or 27 mans, at four Ct. Rs. per man, 108 Ct. Rs.			£10 16 0
Interest and insurance, at fifteen per centum...			1 12 6
Freight payable in England, at six pounds sterling			6 0 0
			£18 8 6
Sold at thirty shillings per cwt., exclusive of customs and excise ...	£28 0 0		
Charges of merchandise, &c., as reckoned by the India Company on other goods, at three per centum	0 14 9		
			27 5 3
Profit			£8 16 9

If freight must be paid at £15 per ton, a loss would be sustained, unless the tobacco equal the best sorts that are imported from America.

Excepting tobacco, which is exotic in India, this fruitful region seems to have been the parent-country of most productions, which were once ranked among luxuries, but which are now become necessaries of life. The sugar-cane, whose very name was scarcely known by the antient inhabitants of Europe, grew luxuriantly throughout Bengal* in the remotest times. From India it was introduced into Arabia, and thence into Europe and Africa. It is said, by some authors, to have been indi-

* Gaur, the antient name of the capital of Bengal, and of the province itself, is apparently derived from Gur, which, both in the antient and modern languages of India, signifies raw sugar. From the Sanscrit term for manufactured sugar (Sarcara) are derived the Persian, Greek, Latin, and modern European, names of the cane and its produce. Even the Arabic term may be also deduced from another Sanscrit word (o'hand), which bears the same signification.

genous in America; this opinion might perhaps be disputed, for historical facts seem to contradict it. Certain it is, that the cane was carried in the year 1506 from the Canaries to St. Domingo, where the first sugar-work was soon after erected by an enterprising Spaniard. The cultivation was pursued with such success in the islands, and on the continent of South America, that the produce soon undersold the sugar of other countries; and the importation of it from India, which was shortly afterwards discontinued by the Portuguese, has only lately been revived.

A sudden rise in the price of sugar in Great Britain, partly caused by a failure in the crops of the West Indies, and partly by the increasing consumption of this article throughout Europe, was felt as a serious evil by the British nation. Their eyes were turned for relief towards Bengal, and not in vain. An immediate supply was obtained from this country; and the exportation of sugar from Bengal to Europe, which had commenced a few years earlier, still continues, and will, it is hoped, be annually, increased to meet the growing demand for it, and to benefit, in common with the West-India islands, by the advanced price which it bears in the markets of Europe.

From Benares to Rongpur, from the borders of Assam to those of Catac, there is scarcely a district in Bengal or its dependent provinces wherein the sugar-cane does not flourish. It thrives most especially in the provinces of Benares, Bihar, Rengpur, Birbhum, Birdwan, and Mednipur; it is successfully cultivated in all, and there seem to be no other bounds to the possible production of sugar in Bengal than the limits of the demand and consequent vend of it. The growth for home-consumption and for the inland trade is vast, and it only needs encouragement to equal the demand of Europe also.

It is cheaply produced and frugally manufactured. Raw sugar, prepared in a mode peculiar to India, but analogous to the process of making muscovado, costs less than five shillings sterling per cwt. An equal quantity of muscovado sugar might be here made at little more than this cost;

whereas, in the British West Indies it cannot be afforded for six times that price. So great a disproportion will cease to appear surprising, when the relative circumstances of the two countries shall have been duly weighed and impartially considered. Agriculture is here conducted with most frugal simplicity. The necessaries of life are cheaper in India than in any other commercial country and cheaper in Bengal than in any other province of India. The simplest diet and most scanty clothing suffice to the peasant, and the price of labour is consequently low. Every implement used in tillage is proportionably cheap, and cattle are neither dear to the purchaser nor expensive to the owner. The preparation of sugar is equally simple and devoid of expense. The manufacture is unincumbered with costly works. His dwelling is a straw hut; his machinery and utensils consist of a mill, constructed on the simplest plan, and a few earthen pots. In short, he requires little capital, and is fully rewarded with an inconsiderable advance on the first value of the cane.

The same advantages do not exist in the West Indies. It is worthy of observation, that the labour of the negro constitutes more than three-fifths of the cost of sugar in Jamaica. So that, if the West-Indian planter were even able to substitute straw huts for his expensive buildings, or simple implements and earthen vessels for his intricate machinery and costly apparatus, still the price of labour would be an insuperable bar to a successful competition. Independently of calculation and comparison, it is obvious, that the labour of a slave must be much dearer than that of a freeman, since the original purchase will always form a heavy charge, from which hired labour is exempt. Moreover, the West-Indian slave has no incentive for exertion; nor can he be roused to it, by the smart of recent chastisement or the dread of impending punishment.

Slavery, indeed, is not known in Bengal. Throughout some districts, the labours of husbandry are executed chiefly by bond-servants. In certain provinces, the ploughmen are mostly slaves of the peasants for whom they labour; but, treated by their masters more like hereditary servants, or

like mancipated hinds, than like purchased slaves, they labour with cheerful diligence and unforced zeal.

In some places, also, the land-holders have a claim to the servitude of thousands among the inhabitants of their estates. This claim, which is seldom enforced, and which in many instances is become wholly obsolete, is founded on some traditional rights acquired many generations ago, in a state of society different from the present: and slaves of this description do in fact enjoy every privilege of a freeman except the name; or, at the worst they must be considered as villains attached to the glebe, rather than as bondmen labouring for the sole benefit of their owners. Indeed, throughout India, the relation of master and slave appears to impose the duty of protection and cherishment on the master, as much as that of fidelity and obedience on the slave, and their mutual conduct is consistent with the sense of such an obligation; since it is marked with gentleness and indulgence on the one side, and with zeal and loyalty on the other.

Though we admit the fact, that slaves may be found in Bengal among the labourers in husbandry, yet in most provinces none but freemen are occupied in the business of agriculture. The price of their daily labour, when paid in money, may be justly estimated at little more than one ana sica, but less than two-pence sterling. In cities and large towns the hire of a day-labourer is indeed greater; because provisions are there dearer, and the separation of the man from his family renders larger earnings necessary to their support: but, even in the neighbourhood of Calcutta, men may be hired for field-labour at the rate of two rupiyas and a half per mensem, which is equivalent to two-pence half penny per diem. Compare this with the price of labour in the West Indies, or compare with it the still cheaper hire of labour by a payment in kind, a mode which is customary throughout Bengal. The allowance of grain, usually made to strong labourers, cannot be valued at more than one ana, and does in reality cost the husbandman much less. The average would scarcely exceed a penny half penny In short, viewed in every way, labour

is six times, perhaps ten times, dearer in the West Indies than in Bengal.

In the warmth of controversy, some advocates for the West-Indian islands averred the general imbecility of the natives of these provinces and their deficiency in toil and exertion. This objection does not require a formal refutation; we need only refer those, who entertain doubts on this subject, to the numerous and beautiful manufactures of Bengal, and to the daily proofs which its inhabitants give of patient labour and imitative genius. In other pleas, brought forward by those who contend for the right of the West-Indian merchants to the monopoly of sugar, Bengal seems to be considered by them as a foreign and tributary country, whose industry should be suppressed and discouraged, if it can, by any means, clash with the interest of particular colonies. But this can no longer be considered as a mere subjugated country, from which Great Britain draws a precarious and temporary tribute. It is now intimately connected, and ought to be firmly incorporated, with the empire, of which it forms a considerable branch, and to the support of which it largely contributes. The government of that empire has as obvious an interest in promoting its prosperity, as in studying the welfare of other provinces subject to Great Britain.

Convinced, as they doubtless are, that England may receive sugar from Bengal without any real injury to the West-Indian Islands, the Government will surely tolerate and even encourage, the importation of it from Bengal. For this purpose it is only necessary to equalise the duties, and permit the sugar to be conveyed on private shipping. The effects of such an equitable arrangement may be made evident, by computing the cost of sugar shipped in Bengal and the rate at which it might be delivered by the British merchant to the English consumer. We shall obviate the possibility of any objection to the grounds of this calculation, by assuming the price actually paid in Calcutta for the best clayed sugar, instead of the estimated rate at which muscovado could be afforded. It would not be

unreasonable, in estimating the future cost of sugar on the supposition of a regular and extensive demand, to make a suitable deduction for greater cheapness in consequence of more universal cultivation; since the manufacturer and merchant, dealing more largely, would be contented with smaller profits on quicker returns. Great improvement, too, may be expected in the manufacture of it; but, although this be sufficiently probable, it may be more satisfactory to ground the present estimate on the price paid in Calcutta, previously to the great enhancement caused by the late extraordinary demand.

On a retrospect to the period when the cultivation and manufacture kept pace with the wants of the market, we may justly state the average cost of the best clayed sugar in Calcutta at six sica rupiyas for the factory man.* At this rate, a cargo of five hundred tons, imported in London, should cost the English merchant less than 36s. a cwt., exclusive of duties and charges in England.

15,000 factory ms. at 6 Sa. Rs.	...	90,000	0	
Export-duties and fees	...	2,362	8	
Packing, porterage, and boat-hire	...	5,418	12	
Commission on 90,000 Sa. Rs. at 5 per centum	...	4,500	0	
		12,281	4	
		1,02,281	4	11,864 12
Freight, at 6l. per ton	...	...		3,000 0
Insurance on the outlay, at 10 per centum	...			1,186 9
Interest on the same, at 5 per centum, for a year	...	...	...	652 10
				£16,703 11

* We take a much higher rate than the average of many years would suggest, to avoid any cavils against our estimate. Sugar might probably be shipped for less than six rupiyas per man.

Duty on 475 tons at 15s. as is paid on West-Indian sugar ...	7,125	0	
Charges of merchandise, &c., as reckoned by the Indian Company, at 3 per centum on the value ...	997	10	
			8,122 10
			£24,826 1
Deduct from the quantity originally shipped, 5 per centum for wastage and uncovered risks, the remaining 475 tons will produce, at 70 shillings the cwt.			33,250 0
Profit ...			£8,423 19

Compare herewith an estimate grounded on the present rates of freight and customs:

500 tons of clayed sugar shipped in Calcutta for	11,864 12
Freight, at 15l. per ton	7,500 0
Insurance on the outlay, at 10 per centum ...	1,186 9
Interest on the same, at 5 per centum for a year	652 10
	£21,203 11

Duty on 475 ton of sugar, at £37 16 3 per centum ad valorem, as is now paid on East-Indian sugar...	12,572	13	
Charges of merchandise, &c. ...	997	10	
			13,570 3
			34,773 14
Amount of the sales			33,250 0
Loss ...			£1,523 14

Hence it is evident that the exporter from Bengal, so long as he must pay 22l. 10s. or even 15l. per ton for freight, and £37 16 3 per centum ad valorem for

duties of custom,* can resort to the English market then only when sugar sells for more than eighty shillings the cwt., including duties: but if he were at liberty to provide freight on the lowest terms for which he could obtain it, and if duties were equalised, he might derive profit by selling clayed sugar for sixty shillings the cwt., and muscovado for much less. Hitherto the very enhanced price of sugar in England has encouraged the importation of it from Bengal, in spite of unequal duties and excessive freight. Remove these disadvantages, and Bengal will supply Great Britain, at a cheap rate, with a part of what the calls of the English market require, and will, thereby, prevent the exaction of an inordinate profit on the sugar produced in the West Indies.

Let us now pass to another production, for the sale of which also India maintains a competition with the Islands of America.

Cotton is cultivated throughout Bengal. Formerly the produce was nearly equal to the consumption, and very little was imported by sea or brought from inland countries. But the increase of manufactures, or, the decline of cultivation, has now given rise to a very large importation from the banks of the Jamuna and from the Dekhin. It is there raised so much more cheaply than in Bengal, that it supports a successful competition, notwithstanding the heavy expenses of distant transport by land and water; and undersells cotton of a middle quality in those very provinces where this article was heretofore abundantly produced. A fine sort of cotton is still grown in the eastern districts of Bengal, for the most delicate manufactures; and a coarse kind is gathered, in every part of the province, from plants thinly interspersed in fields of pulse or grain. This last kind is almost exclusively employed in the coarsest manufactures for home-consumption; and the cotton, imported through the Doab, chiefly supplies the looms at which better cloths are wove.

* The duties are paid in England by the purchaser, but the charge in effect falls upon the importer.

Several species and numerous varieties of the plant afford this useful production. Some sorts are undoubtedly indigenous in America; others are certainly natives of India. Whether exotic or indigenous in Arabia, it has been long known there: the culture was thence introduced into the Levant; and the produce, with its Arabic name,* was conveyed into Europe. But India has, in all times, been the country most celebrated for cotton manufactures; and even now, although the skill and ingenuity of British artisans have been exerted in the improvement of this important branch of manufactures, the finest muslins of Bengal remain still unrivalled by the fabrics of Great Britain.

Notwithstanding this inferiority in muslins, and the disadvantage of dearer manufacture in other sorts, the establishments formed in Great Britain for cotton have added greatly to the prosperity of British commerce, and well deserve the encouragement which they receive. In the infancy of the manufacture, the West Indies abundantly supplied the raw material which was required. None was received from Bengal; and even Surat did not gain a new mart for its cotton, but continued to supply China and other countries, where the merchants of Bombay had been long accustomed to find a vend for this production. But the increasing wants of Great Britain soon began to exceed what the West Indies were able to furnish. A consequent enhancement of price induced some enterprising merchants to send cotton, from Surat and Bombay, to Europe. The adventure was successful, and has been followed by similar experiments from Bengal to England and to China. These have been rewarded with profit; and the exportation of cotton-wool now promises to become a permanent branch of trade.

Should the husbandmen of Bengal find encouragement to resume the extensive culture of this production, the foreign demand will become the source of great accession

* The names of cotton in most languages of Europe are obviously derived from the Arabic Kutn.

of wealth to this province; or, should the competition of cotton imported from Agra continue to impede the cultivation of it in Bengal, still benefit will be derived to both countries from the commerce of an article in such general request.

Different sorts, very unequal in quality, are imported into Bengal; the best is brought by land from Nagpur, in the Dekhin, to Mirzapur, in the province of Benares, which town is the principal mart of cotton. Its average-price may be there reckoned at sixteen to eighteen rupiyas for 100 pounds by weight, or £2 4 6 per owt., nearly. The usual contract for its transportation from Nagpur to Mirzapur, a distance which, by the shortest route, exceeds four hundred miles, is thirty-four rupiyas for 500 pounds laden upon one ox.* This, it is true, includes duties levied on the road; we shall therefore, instead of inferring the prime cost from these grounds of computation, state the usual price at Nagpur, upon the result of direct inquiries at an average-price which, reduced to English weight and money, is equivalent to two-pence half-penny for one avoirdupois pound.

The next sort of cotton is imported at the same mart from Jalwen, a town situated to the westward of the Jamuna river, and not very distant from the city of Calpi. It is transported by land from that town to Canhpur, on the Ganges; a distance little exceeding seventy miles. From Canhpur it is brought to Mirzapur by water, and there sells, on a medium, for two pounds sterling a cwt. nearly. The market, it should be remarked, is very fluctuating; and has been known to vary within few months from eleven to twenty-two rupiyas the man; but the average here assumed will not be found, upon the minutest inquiry, to deviate much from the most strict accuracy.

* Small oxen carry a less load, and their hire is reduced accordingly. A large ox, able to carry 500 pounds in journeys of eight or ten miles a day, may be hired, for the transport of merchandise between Mirzapur and Nagpur, at the rate of twenty rupiyas, exclusive of duties.

Another sort, of nearly equal value in the Indian market, but certainly superior in the length and fineness of its staple, is brought, by a land-carriage, of more than five hundred miles, from Ameraweti, a well-known mart in the Dekhin, situated about thirty miles south of the city of Elichpur. The prime cost, reduced to English money, is less than two-pence for an avoirdupois pound; as it sells at Mirzapur for the same price with that which is brought from Jalwen, or at most five per centum dearer.

It would be tedious to enumerate all the places whence cotton is imported. The chief mart for that which is produced in the province of Agra is Hat'hras, near the Jumuna river. It is thence conveyed, by an easy land-carriage for a hundred miles, to Ferrukhabad on the Ganges, and from that city by water to Mirzapur, where it usually sells for £ 1 13 per cwt. A better sort from Cuch-'hora fetches a superior price, and may be estimated at the average-rate of £ 1 16 per cwt.

We have noticed this difference in the quality of various sorts of cotton imported into this province, for the purpose of showing that such kinds as shall be found best suited to the different wants of manufactures in Great Britain may, it is presumed, be now procurable in Bengal. If any sort be requisite, which is not now grown in countries contiguous to Bengal, the cultivation of it might doubtless be diffused there without difficulty. A perennial species, which produces cotton of uncommon beauty and excellence, has been already introduced from the Island of Bourbon. An enterprising individual actually formed a considerable plantation of it in the province of Benares. Though his experiment was not successful, other species, at the same or in other places, may, perhaps, be advantageously introduced.

The value of those sorts of cotton which have been hitherto exported from Bengal, is now ascertained by sufficient experience. The cotton of India appears to have an acknowledged superiority over that of the Levant, and equals in the British market some of the imports from Spanish America and the Brazils. Were it as well cleaned,

it would support a better competition than it now does with the produce of the West-Indian Islands; and if freight from Bengal and Bombay to England were reduced to an equitable rate, it would successfully rival all other countries, even though the price of cotton-wool in Great Britain should return to the former level. An estimate of the expense, for which it may be landed in England, will confirm the opinion which we have now hasarded.

The price of the best cotton at the mart of Mirzapur has been estimated by us at £ 2 4 6; that of the lowest quality of good cotton at £1 13. The cost of conveying it by water to Caloutta is thirty rupiyas for 100 large mans, or 15s 6d. for a ton. But it may be more adviseable to take the average-price of the Calcutta market. This would be highly rated for the best sort at £2 15 the owt. and for the other at £2 5; we shall, however, ground computations on these prices:

1,140 bales of cotton, containing 4,000 owt., nearly, provided at £2 15 per owt. ...	£11,000	0
Freight for 570 tons by measurement, at £15 per ton	8,550	0
Duties on the export from Calcutta at Sa. Rs. 1,762	204	8
Screwing, packing, porterage, boat-hire, &c., Sa. Rs. 5,021	590	10
Insurance on £20,000, at £10	2,000	0
Commission on £11,000 at five per centum ...	550	0
	£22,894	18

Consequently, the cost of cotton-wool imported from Bengal into England, exclusive of charges at London, is £5 14 6 per cwt. or 12¼d. the pound. Were freight reduced to six pounds for a ton, the saving in that charge, with insurance, would amount to £5,630, and the best cotton would therefore cost the importer 9¼d. the pound. His farther saving in the first purchase, and subsequent charges on the second sort of cotton, would amount to little more than £2,350. This, consequently, would cost

him, at the present rate of freight, eleven pence the pound; or, when the hire of tonnage becomss cheaper, eight pence. He would derive ample profit by selling at sixteen or seventeen pence for the pound, defraying, however, the India-Company's duty and the charges of merchandise in London. Since the best sort, before mentioned, would produce a higher price, and command a more certain market, than the sorts which have been hitherto tried, we are disposed to hope that Bengal would be found capable of supporting a successful competition, in the British market, with the Levant, with Spanish America, and with all other foreign countries, which now rival the British West Indies in the English market.

Europe was antiently supplied with silk through the medium of Indian commerce. But, according to most authors, it was the produce of China only, and even there was sparingly produced. Were the fact important, it might be shewn, that the culture was not unknown to the eastern parts of Hindustan. For the antient language of India has names for the silk-worm and for manufactured silk; and, among the numerous tribes of Hindus, derived from the mixture of the original tribes, there are two classes, whose appropriated occupations (whence, too, they derive their appellations) were the feeding of silk-worms and the spinning of silk.

The excessive price which silk bore in Europe, when it could be obtained only through the commerce of India, rendered this the most valuable article of oriental traffic. The silk-worm, long since introduced into Greece, afterwards propagated in Italy, and more lately in France, left India deprived of its exclusive commerce in silk. Bengal has now recovered a share in the supplying of this production; but, unless we are misinformed, the raw silk of Bengal bears in the European market a price somewhat inferior to that of the best Italian silk. As the filatures of Italy have been copied in Bengal, it does not occur to us that we ought to ascribe this inferiority to defective manufacture. It has

been thought that the best silk is not obtained from worms fed on the sort of mulberry which is commonly cultivated in Bengal. Experiment has seemed to confirm this notion, and possibly the management of the silk-worm may be likewise defective. That this may be the more easily ascertained, we shall fully describe the present management, although this detail will leave us no room to notice a curious topic, namely, that of silk obtained from wild worms, and from those which are fed on other plants besides mulberry. It is a subject interesting as well as curious, since much silk of this kind supplies home-consumption, much is imported from the countries situated on the north-east border of Bengal, and on the southern frontier of Benares; much is exported, wrought and unwrought, to the western parts of India: and some enters into manufactures, which are said to be greatly in request in Europe.

To plant a new field, the waste-land is opened with the spade in the month of April; good soil is brought, and enough is thrown on the field to raise it one cubit. The ground is well broken with the plough, and levelled with an implement, which in form resembles a ladder, but which supplies the place of a harrow. The mulberry is planted in October; the slips are cut a span long, and are thrown into a hole and covered from the sun; they are continually watered until at the end of a fortnight, they begin to vegetate. They are now transplanted into the field, in holes distant a span from each other, and nearly one span deep: four or five cuttings are placed obliquely in each hole, which is then filled up so as to cover the slips with a finger of earth closely pressed down. So soon as the plants appear in December, or January, the field is weeded. In April, when they are grown to the height of a cubit, they are topped, so as to leave a stem one hand high; otherwise it is thought that the leaves would be bitter and hard, and that the worms would refuse them. A hand-hoeing is now given, and a fortnight afterwards the leaves are ready for use. The plant is then cut down a little above the root

and the silk-worms are fed with the leaves; the field is weeded, if necessary, and another crop is obtained in June, and a third in July; but the leaves only of this last crop are gathered, without cutting the stem, because that operation at so late a season would, it is apprehended, injure the plant. The field is again weeded, and a fourth crop is ready in September; after gathering it the ground is ploughed four times with two ploughs, and levelled with the implement above-mentioned. In November, a hand-hoeing assists vegetation, and accelerates the best crop, which is cut in December; this is followed by a hand-hoeing and weeding, and is succeeded by another crop in March. The same course recommences; and the field, if sufficiently attended and laboured, will continue to be productive during many years.

Five varieties of silk-worms are distinguished; the kind, which, as its name indicates, seems to be thought native, is preferred.* The balls, preserved for the grain, are kept in bags suspended to the roof of the peasant's hut; when the insect is ready to burst its prison, a few cods are placed in a large basket on one shelf of a frame provided for the nurture of the worm. The frame in common use consists of sixteen shelves placed in a shed upon vessels filled with water, by way of precaution against ants. After the moths quit their covering,† attendance is required to move the males, so soon as their functions have been performed, and the females, when they have produced their eggs. The basket is carefully covered with a cloth, and in a fortnight the worm quits the egg. They are first fed with leaves chopped very fine; as they advance in their growth, they are dispersed into more baskets on the several shelves of the frame, and are supplied with leaves cut in larger pieces, and latterly with whole leaves, until the

* It is called *desi*. Whether this and other sorts be only varieties of the Bombyx Mori (as is probable), or different species, we have not learnt. The wild silk-worms seem to be different.

† From the perforated balls, a coarse silk is obtained, which is known in the home-commerce by the name of Nat.

period when the insect quits its food : as soon as it recommences eating, branches of mulberry are thrown on with the leaves upon them, and the insects eat with eagerness, and soon fill the baskets on the whole number of shelves : they arrive at their full size in little more than a month from their birth ; and, changing their skins for the last time, are disposed to begin their cones. They are now removed to baskets divided into spiral compartments, where they spin their webs and cover themselves with silk. When the cone is completed, a few are set apart for propagation, and the rest are exposed to the heat of the sun for the purpose of killing the chrysalis.

The peasants sell the cones to the filatures, most of which are in the employ of the Company. From the rejected balls, they wind silk by the following process. The cones must be allowed to cool after exposure to the sun ; the excretions of the worms are collected from the feeding-baskets, and thrown into a hole dug for that purpose. The balls of silk are put into the hole, which is carefully covered up. In two days the cones are taken out and boiled in an earthen vessel, and the silk is wound off by a hand-reel or by the common one, both of which are simple, and do not differ materially from the machines used for the same purpose in Europe. From the fur picked off the cones, a coarse silk is spun, which is used for making carpets and for other purposes.

In the districts to which our inquiries respecting silk have been limited, the culture of the mulberry is estimated at fifteen rupiyas fourteen anas, and the produce at nineteen rupiyas eight anas for the bigha.* From the apparent pro-

* First planting for a field of one bigha.	Sa. Rs.	As.
Cost of mulberry-cuttings	1	0
Eight ploughings, with two ploughs each, at four anas	2	0
Expense of planting the slips	2	0
Two hand-hoeings	2	8
Weeding twice	2	0
Rent	4	0
Total outlay before a crop be obtained ...	13	8

fit of three rupiyas and ten anas must be deducted the superiutendence of the culture, and some labour whioh is not provided for in the estimate; such as that of gathering the crop and transporting it.

The peasant, who feeds his own silk-worms, gives full employment to his family; how far their labour is rewarded may be judged from the usual estimation of the produce of silk. A frame, filled with worms from 640 cones, produces near fifty pounds weight of balls of silk, after consuming ten loads of mulberry leaves; consequently one hundred weight and a half of cones, or two mans nearly, may be obtained from the produce of one bigha of land: the best cones may be sold to the filatures at the rate of eighteen sers for a rupiya; but a deduction must be made herefrom for such balls of silk as are of inferior quality. We have not materials for estimating the expense and produce of filatures. With the hand-reel, two sers (or four pounds avoirdupois) of silk are obtained from a man of cones. This reel is tedious in its operation; but labour with it is paid no

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ANNUAL.			
Four ploughings, as before, ...	1	0	
Two hand-hoeings	2	8	
Weeding five times	5	0	
			8 8
Rent	4	0	
Use of money, at twenty-five per centum on the first outlay	3	6	
			7 6
			15 14
Annual produce, if the plant be sold, (as is frequently practised).			
In December, 7 loads of plant, (each load as much as one labourer carries,) at 1 rupiya .	7	0	
March ... ... 5¼ do. at 8 anas ...	2	12	
May ... ... 5 do. at 8 — ...	2	8	
June ... ... 4 do. at 8 — ...	2	0	
July ... ... 6 do. at 8 — ...	3	0	
September ... 4½ do. at 8 — ...	2	4	
			19 8

better than that of spinning cotton-yarn, namely, about one rupiya and a half for a ser of yarn. However, the charges of filatures cannot be much greater; and making an allowance for the proportion of inferior silk reserved for Indian consumption, and similar to what is known in Europe by the name of floretta, the prime cost of filature-silk, shipped for Europe, need not exceed ten current rupiyas for a ser; if it sells on a medium at twenty-five shillings for the great pound, it might afford a considerable profit.*

The manufacture of indigo appears to have been known and practised in India at the earliest period. From this country, whence the dye obtains its name,† Europe was anciently supplied with it, until the produce of America engrossed the market. Within a very late period, the enterprise of a few Europeans in Bengal has revived the exportation of indigo, but it has been mostly manufactured by themselves. The nicety of the process, by which the best indigo is made, demands a skilful and experienced eye. It is not from the practice of making some pounds from a few roods of land that competent skill can be attained. Yet such was the management of the natives. Every peasant individually extracted the dye from the plants which he had cultivated on a few biswas of ground; or else the manufacture was undertaken by a dyer, as an occasional

* The production of raw silk in Bengal might be increased to supply much more than 150 or 200 tons, which is said to be the quantity now exported. Perhaps the districts, to which it is limited, cannot raise a much greater quantity than they do at present: but the silk-worm has been tried in South Bihar, and in the northern provinces of Bengal; and, upon the result of experiment, we are warranted to presume that the production might be more generally diffused. It is at present almost confined to a part of the province of Berdwan, and to the vicinity of Bhagirathi river and great Ganges, from the fork of those rivers for a hundred miles down their stream.

† Indicum, from which the words indico and indigo are derived. The Americans, it is said, call it anil, which is an evident corruption of the oriental name nil. Yet the plant is probably indigenous in America as well as in Hindostan.

employment connected with his profession. The better management of America in this respect, rather than any essential difference in the intention of the progress, transferred the supply of the market to America; for, it is now well ascertained that the indigo of Bengal, so far as its natural quality may be solely considered, is superior to that of North America and equal to the best of South America; and, although some labour be wasted in the process used by the natives, or at least, though the labour be not so well applied as it is in manufactures conducted on a larger scale, the cheap price at which the natives did nevertheless afford it* would have preserved the market, had not the superior quality of the indigo, which is made at large manufactures, given to this a decided preference.

The spirited and persevering exertions of a few individuals have restored this commerce to Bengal, solely by the superior quality of their manufacture; for, so far as regards the culture, no material change has been made in the practice of the natives. Ground of any sort, that is fertile and secure from probable inundation, is prepared as in the common husbandry, and sown in the broadcast during the latter months of the hot season, or at the commencement of the rains. It should be weeded twice or oftener; and, with no farther labour, the early plant is ready for cutting in the beginning of August; and the fields, arriving successively at maturity, supply the works until the commencement of October. Other management has been tried by throwing the land into furrows, and by sowing in drills, but without much success. One improvement, however, deserves notice, as it enlarges the season of cultivating and manufacturing indigo; it consists in sowing early in the hot season upon low lands, for a crop to be reaped at the commencement of the rains before the annual inundation, or sowing at the same season upon higher ground for an early crop forced

* It was formerly made and sold, in the province of Agra, at ten or sixteen rupiyas for the man of forty dams. See the Ayeen Akberry, vol. II, page 46.

by frequent watering of the field. This has been introduced in the western districts, where circumstances have admitted of experiments. In the southern provinces, the manufacturers cultivate little themselves, but purchase the plant from the neighbouring peasantry: it seldom yields produce beyond the year in which it is sown, while rattoons or lay-overs are preserved, in the western provinces, to the second, and even to the third and fourth, years.

Of the expense and produce it is not easy to form an accurate estimate, because many factories purchase the plant by measure, while others pay for the quantity of land, and some plant their own indigo. The produce in different seasons is most widely unequal; and, in the same season, equal quantities of the plant afford very disproportionate quantities of the dye. However, it may be stated, that four rupiyas for a bigha do not ill pay the rent and culture; and the manufacturer need not be dissatisfied if he obtain six pounds of the dye from each bigha, at an expense of manufacture, including his own subsistence, little exceeding the cost of the plant.

The profit of the manufacturer depends on the quality of the indigo: and this is very unequal, since it varies according to the skill of the manufacturer. Excluding indigo of very superior quality, the medium price of it when sold for exportation, cannot be rated higher than current rupiyas 140, or sica rupiyas 120, for a man: this affords to the manufacturer a mere subsistence, from a speculation wherein the expense is certain and the returns precarious.* The fact confirms the estimate, for it is well known that little has hitherto been gained by the speculation. The successful planters are few; the unsuccessful, numerous.

* It is not easy to estimate the prime-cost of indigo. In districts, where the production is cheapest in favourable seasons, it is, also, almost precarious, and sometimes fails entirely. From information received, we are disposed to state the prime-cost from 60 to 100 rupiyas for a man. Probably the real average of the cost may fall between seventy and eighty rupiyas.

The manufacture is nevertheless pursued with spirit, and not unreasonably; for, experience may be expected to correct the errors which are unavoidable in new undertakings. The sagacity of ingenious men has greatly improved the process, which is still in the progress of improvement, for determining the most advantageous size and proportion of the steepers and batteries, for ascertaining with precision the period of sufficient fermentation and agitation, for drying the indigo expeditiously, and subjecting it to a process calculated to prevent injury by worms and maggots, and for an arrangement to conduct the process with the utmost cleanliness, with economy of labour, and without wastage.

From an inconsiderable production, it has grown, through the exertions of private persons, to an object of great commercial importance; and under a skilful and frugal management, it may be expected to reward the enterprise by which it has been established.

CHAPTER VI.

Internal Commerce.—Grain,—Piece-Goods,—Saltpetre,—and other Objects of Exportation.

BENGAL, from its western boundary to the shores of the sea, is watered by the Ganges, and is intersected in every direction by many navigable streams which fall into that river. Few districts are wholly destitute of internal navigation. In most of them, lakes, rivulets, and water-courses, communicating with great rivers and becoming passable in the rainy season, conduct boats to the peasant's door. But his valuable produce being reaped at other seasons, and disposed of as soon as gathered, he derives less benefit from navigation than the survey of its extent would lead us to suppose. Land-carriage conveys the greater part of the produce from the place of its growth to that of its embarkation on the Ganges; and the rapid currents and dangerous shoals, of many considerable rivers, forbid the use of large vessels, and permit the passage of none but canoes and small boats. The navigation does, nevertheless, employ a vast number of large vessels. It is interesting to note, at a mart of great resort, the various constructions of boats assembled there from different districts, each adapted to the nature of the rivers which they generally navigate. Fancy has had some share in planning them, but the most essential differences are evidently grounded on considerations of utility. The flat clinker-built vessels of the western districts would be ill adapted to the wide and stormy navigation of the lower Ganges. The unwieldy bulk of the lofty boats, which use the Ganges from Patna to Calcutta, would not suit the rapid and

shallow rivers of the western districts, nor the narrow creeks through which vessels pass in the eastern navigation; and the low, but deep, boats of these districts are not adapted to the shoals of the western rivers.

In one navigation, wherein vessels descend with the stream, and return by the track-rope, their construction consults neither aptitude for the sail nor for the oar. In the other, wherein boats, during the progress of the same voyage, are assisted by the stream of one creek and opposed by the current of the next, under banks impracticable to the track-rope, their principal dependence is on the oar: for, a winding navigation in narrow passages admits of no reliance on the sail. Often grounding in the shallows, vessels would be unsafe if built with keels. All the constructions of Bengal want this addition, so necessary for sailing, and it is probably owing to the same cause, that so rude a form for the rudder, as that of a large oar, has been so long retained.

The various forms now in use afford vessels built more economically than they could be constructed on a European model. They are cheaply found. A circular board tied to a bambu cane forms the oar; a wooden frame, loaded with stones, is the anchor; a few bambus lashed together supply the mast; a cane of the same species serves for a yard to the sail; this, again, is made of the cheapest materials.* The trees of the country afford resins to sheath the vessels; and a straw-thatch supplies the place of a deck to shelter the merchandise. The vessels are navigated with equal frugality: the boatmen receive little more than their food, which is most commonly furnished in grain, together with an inconsiderable allowance in money, for the purchase of salt and for the supply of other petty wants.

It is estimated that the owners of vessels, and those who conduct in person the principal part of the internal

* A coarse sack cloth, wove from twine made of the fibrous stem of the rushy crotalaria, or of the hemp hibiscus; both of which plants are abundantly cultivated throughout Bengal, for this and other uses of twine, rope, &c.

commerce, transport their own merchandise for a much smaller expense than the freight which they usually charge to others. The rates of this freight, from mart to mart, are in general regular and uniform. From the average of hire for different voyages, a medium may be assumed between three and four rupiyas on a hundred mans for a hundred miles.

In the land-carriage, the owners of the cattle are also the principal traffickers, oftener purchasing at one market to sell at another, than letting their cattle to resident merchants. They transport the merchandise upon oxen trained to burden, and sometimes upon horses, (of that small breed of poneys, which is common in Bengal,) more rarely, on buffaloes. These, though more docile even than oxen, are seldom employed for burden within the limits of Bengal proper; they require more substantial pasture than can be gleaned on a journey from the road-side; and, fond of lying in water, they would damage their load in the rivers, which they have frequent occasion to ford. Yet, in the eastern parts of Bengal, and still more so in the provinces which border on its western frontier, buffaloes are employed both for draft and carriage. We have even seen them used in the labours of husbandry. But the buffalo is more sluggish and a slower traveller than the ox, and does not bear a much greater burden. Large cattle will carry a load of six mans, on easy journeys of eight or ten miles, and even the small cattle are tasked with two mans. The strongest oxen may be hired at the rate of eight anas per diem on the dearest roads. In general, the price of land-carriage need not exceed one rupiya a man for a hundred miles. The average of customary rates in different provinces would exhibit a much smaller sum; and the carrier does certainly transport merchandise for his own account at far less expense than the hire which he is accustomed to charge. He can feed his cattle, and even buy fodder when necessary, pay the wages of one driver for four bullocks, and gradually reimburse to himself the purchase of his oxen, if his daily gain amounts to two anas for every head of cattle, in a

district moderately cheap, or three anas, in the dearest provinces.

Did the roads permit the use of carts, land-carriage would be much cheaper; but the highways are not generally in a condition for distant journeys with wheel-carriages. At a former period the communication was better assisted. A magnificent road, from the banks of the Ghaghra or Dewa to the Brahmeputre, formed a safe and convenient communication at all seasons, in a length of four hundred miles, through countries exposed to annual inundation. Of the causeways and avenues, which formed this road, some remains may yet be traced. Other highways, less extensive, but communicating from town to town, facilitated intercourse between every part of the country. At present the beaten path directs the traveller; but no artificial road, nor any other accommodation, alleviates his fatigue, and his progress is altogether barred in the rainy season.

That, in the short lapse of a few years, magnificent roads should have fallen into such total decay as barely to leave the trace of their former direction, and of the public inns, or serais, which accommodated travellers, must be ascribed to the want of substantial and durable materials for their construction. The country affords none, unless they be brought from hilly countries, at an enormous expense, or unless bricks be burned for the purpose. The great cost of highways, which have been constructed with these materials in the neighbourhood of the principal European stations, discourages the hope of such roads becoming general. But, under the encouragement and attention recently given to this important object, they may be constructed, as they formerly were under the native government, by the simple expedient of raising the soil between two ditches, and throwing up causeways, where a low situation requires them. The accommodations which travellers need can only be expected when frequent intercourse will pay for the providing of them, and the state of society must be very different from the present: for, even in

the principal cities, the stranger finds no accommodation either at public serais or private inns.*

If we turn to the routes of navigation, we shall find that travellers are no better accommodated, though this mode of travelling be most general. The various sorts of barges which are in use show, that the opulent inhabitants of Bengal are not indifferent to convenience on their journeys. But persons, whose circumstances are less affluent, navigate the rivers of Bengal on less convenient embarcations.

The want of accommodation, in travelling by land or water, is doubtless the consequence of limited intercourse, and becomes, in its turn, a cause of discouragement to frequent communication. If duly weighed, it will appear no unimportant circumstance, whether considered as indicating general poverty or the decay of commerce and agriculture. A brisk trade requires much intercourse, and this again promotes traffic, by early information on the wants or the abundance of different provinces. A languid commerce, which merely fetches, in an established course, the produce of provinces usually cheap to dispose of it in districts usually dear, cannot note the smaller variations of markets, and, consequently, the prices of different districts find their level slowly, and vibrate between wide limits. The effects which great variations in the price of land-produce have upon husbandry are obvious.

The languid state of internal commerce, inferred from the circumstances above-mentioned, is confirmed by the

* The institution of public inns for the accommodation of travellers seems very antient in Hindustan. They were regulated by Shir Shah, who appointed a particular tribe to the charge of them. In many places, where public buildings for that purpose are wanting, the streets, or open spots, in which a few families of this tribe and profession have taken up their abode, are dignified with the name of serais, and may be called private inns. Public serais, together with wells and resting places, have always been more numerous in Hindustan proper and in the Dekhin than in Bengal; they still are so, and the reason is obvious: travelling by land is more frequent there while travelling by water is more common in Bengal.

review of the commodities which it exchanges and by the estimate of their amount. The exportation of grain from corn-districts, and the returns of salt, constitute the principal object of this trade. The importation of cotton from the western provinces, and the exchange of tobacco for betle-nut,* together with some sugar, and a few articles of less note, complete the supply of internal consumption. Manufactures are almost limited to the wants of their immediate neighbourhood, exclnding from this consideration the provision of the public investment and the calls of foreign trade. Piece-goods, silk, saltpetre, opium, sugar, and indigo, pass almost wholly through the Company's hands, excepting only what foreign commerce, and the traffic to various ports in India, export, of such among these articles as the Company do not monopolise.

Grain, the internal commerce of which is entirely conducted by the natives themselves, supplies the consumption of the cities and the export-trade of Bengal. Though salt be the return of that trade, the corn exceeds it in

* No person need be told, that the use of this nut, with lime, the leaves of the betle-vine, and the inspissated juice of a species of mimosa, is universal throughout India. Another variety of the betle-nut, which is much softer than the common sort, is chewed singly, or else with cardamoms, spices, or tobacco; or with the same things which were first mentioned, but loose instead of being wrapped up in the betle-leaves. The common areca-nut is the produce of Bengal; plantations of that beautiful palm-tree are common throughout the lower parts of this province, and the nut is no inconsiderable object of inland commerce. The mimosa c'hadir (or catechu, if this barbarous name must be retained,) grows wild in almost every forest throughout India. Its inspissated juice (absurdly called terra japonica) is an import from ill-cultivated districts into those which are better inhabited, and need not, therefore, be noticed in this place. The betle-vine (a species of pepper) is cultivated throughout India, and its leaves are seldom transported to any considerable distance from the place of their growth: covered vine-yards, containing this plant, or artificial mounds on which they have formerly *stood*, are to be seen in the precincts of almost every town or populous village. The culture is laborious, and, is mostly the separate occupation of a particular tribe; and for this reason, it has been left unnoticed by us in a former chapter.

amount; this cannot be rated at less than two crores for corn transported from considerable distanoes, exclusive, consequently, of the supplies drawn from the immediate neighbourhood of cities and sea-ports.

Except in cities, the bulk of the people is every where subsisted from the produce of their own immediate neighbourhood. In Bengal, they are in general fed on the produce of their own cultivation, as has already been shown, but the observations offered on that point are not applicable to the clothing of the people. At a moderate computation, the consumption of manufactures, though the dress of the natives be simple, does not fall short of six crores of rupiyas. It cannot be questioned but that, if they were fabricated in districts favourably circumstanced, from such manufactures, to supply the consumption of others better adapted to other productions, the labour, which is now employed in such districts for the supply of their own consumption, would be better directed to more profitable arts and manufactures, and hence would arise mutual benefit to both, and great encouragement to an increased internal commerce.

The reflections, which we might suggest on this topic, will occur to any person who considers attentively the manufactures of Bengal; a subject to which we shall now proceed, as it naturally offers itself after the foregoing account of raw-produce and of gruff commodities. The public, however, is in possession of much information on this subject, and we shall, in consequence, confine ourselves to a few general observations.

An erroneous doctrine has been started, as if the great population of these provinces could not avail to effect improvements, notwithstanding opportunities afforded by an increased demand for particular manufactures or for raw-produce; because, "professions are hereditary among the Hindus; the offspring of men of one calling do not intrude into any other; professions are confined to hereditary descent; and the prodnce of any particular manufacture cannot be extended according to the increase of the demand, but must depend upon the population of the cast,

" or tribe, which works on that manufacture : or, in other " words, if the demand for any article should exceed the " ability of the number of workmen who produce it, the " deficiency cannot be supplied by calling in assistance " from other tribes."

In opposition to this unfounded opinion, it is necessary that we not only show, as has been already done, that the population is actually sufficient for great improvement, but we must also prove, that professions are not separated by an impassable line, and that the population affords a sufficient number, whose religious prejudices permit, and whose inclination leads, them to engage in those occupations, through which the desired improvements may be effected.

The Muselmans, to whom the argument above-quoted cannot in any manner be applied, bear no inconsiderable proportion to the whole population. Other descriptions of people, not governed by Hindu institutions, are found among the inhabitants of these provinces; in regard to these, also, the objection is irrelevant. The Hindus themselves, to whom the doctrine which we combat is meant to be applied, cannot exceed nine-tenths of the population : probably they do not bear so great a proportion to the other tribes.* They are, as is well known, divided into four grand classes, but the three first of them are much less numerous than the Sudra. The aggregate of Brahmen, Cshatriya, and Vaisya, may amount, at the most, to a fifth of the population; and even these are not absolutely restricted to their own appointed occupations.† Commerce and agriculture are universally permitted; and, under the general designation of servants of the other three tribes, the Sudras seem to be allowed to prosecute any manufacture.

In this tribe are included, not only the true Sudras, but also the several casts whose origin is ascribed to the pro-

* In the eastern districts of Bengal, the Muselmans are almost equally numerous with the Hindus. In the middle part of Bengal they do not constitute a fourth of the population. To the westward, the disproportion is still greater.

† Menu, Chap. 10, ver. 81, 82, and 83, and ver. 98.

miscuous intercourse of the four classes. To these, also their several occupations were assigned, but neither are they restricted by rigorous injunctions to their own appointed occupations. For any person, unable to procure a subsistence by the exercise of his own profession, may earn a livelihood in the calling of a subordinate cast, within certain limits in the scale of relative precedence assigned to each; and no forfeiture is now incurred by his intruding into a superior profession. It was, indeed, the duty of the Hindu magistrate to restrain the encroachments of inferior tribes on the occupations of superior casts: but, under a foreign government, this restraint has no existence.

In practice, little attention is paid to the limitations to which we have here alluded; daily observation shows even Brahmens exercising the menial profession of a Sudra. We are aware that every cast forms itself into clubs, or lodges, consisting of the several individuals of that cast residing within a small distance; and that these clubs, or lodges, govern themselves by particular rules and customs, or by laws. But, though some restrictions and limitations, not founded on religious prejudices, are found among their by-laws, it may be received as a general maxim, that the occupation, appointed for each tribe, is entitled merely to a preference. Every profession, with few exceptions, is open to every description of persons; and, the discouragement, arising from religious prejudices, is not greater than what exists in Great Britain from the effects of municipal and corporation laws. In Bengal, the numbers of people, actually willing to apply to any particular occupation, are sufficient for the unlimited extension of any manufacture.

If these facts and observations be not considered as a conclusive refutation of the unfounded assertion made on this subject, we must appeal to the experience of every gentleman, who may have resided in the provinces of Bengal, whether a change of occupation and profession does not frequently and indefinitely occur? whether Brahmens are not employed in the most servile offices? and whether the Sudra is not seen elevated to situations of respectabil-

ity and importance : in short, whether the assertion above-quoted be not altogether destitute of foundation ?

Cotton piece-goods are the staple manufacture of India. The various sorts, fabricated in different provinces, from the north of Hindustan to the southern extremity of the peninsula, are too numerous for an ample description of them in this place. A rapid sketch must here suffice. It will serve to convey some notion of the various manufactures distributed through the districts of Bengal and the adjacent provinces.

Plain muslins, distinguished by various names, according to the fineness and to the closeness of their texture, as well as flowered, striped, or chequered, muslins, denominated from their patterns, are fabricated chiefly in the province of Dakha. The manufacture of the finest sorts of thin muslin is almost confined to that province : other kinds, wove more closely, are fabricated on the western side of the Delta of the Ganges ; and a different sort, distinguished by a more rigid texture, does not seem to be limited to particular districts. Coarse muslins, in the shape of turbans, handkerchiefs, &c., are made in almost every province ; and the northern parts of Benares afford both plain and flowered muslins, which are not ill adapted to common uses, though incapable of sustaining any competition with the beautiful and inimitable fabrics of Dakha.

Under the general appellation of calicoes are included various sorts of cloth, to which no English names have been affixed. They are, for the most part, known in Europe by their Indian denominations. Khasahs are fabricated in that part of Bengal which is situated north of the Ganges, between the Mahanada and Isamati rivers, from Maldah to Berbazu. Cloths, nearly similar in quality, and bearing the same name, are made near Tanda in the Vizir's dominions. Bastas are manufactured in the south-west corner of Bengal, near Lakhipur ; and, again, on the western frontier of Benares, in the neighbourhood of Alahabad ; and also in the province of Bihar, and in some other districts. Sanas are the chief fabric of Oresa ; some are

made in the districts of Madnipur, more are imported from the contiguous dominions of the Mahrattas. A similar cloth, under the same denomination, is wrought in the eastern parts of the province of Benares; Garhas are the manufacture of Birbhum; still coarser cloths, denominated Gezis and Gezinas, are wove in almost every district, but specially in the Doab. Other sorts of cloth, the names of which would be less familiar to an English reader, are found in various districts. It would be superfluous to complete the enumeration.

Packthread is wóve into sack-cloth in many places, and especially on the northern frontier of Bengal proper; it is there employed as clothing by the mountaineers. A sort of canvas is made from cotton in the neighbourhood of Patna and of Chatgaon; and flannel, well wove but ill fulled, is wrought at Patna and some other places. Blankets are made every where for common use. A coarse cotton cloth, dyed red with cheap materials, is very generally used: it is chiefly manufactured in the middle of the Doab. Other sorts, dyed of various colours, but especially blue, are prepared for inland-commerce and for exportation by sea. Both fine and coarse calicoes receive a topical dying, with permanent and with fugitive colours, for common use as well as for exportation. The province of Benares, the city of Patna, and the neighbourhood of Calcutta, are the principal seats of this manufacture; concerning which we cannot omit to remark, that the making of chintz appears to be an original art in India, long since invented, and brought to so great a pitch of excellency, that the ingenuity of artists in Europe has hitherto added little improvement, but in the superior elegance of the patterns.

The arts of Europe, on the other hand, have been imitated in India, but without complete success; and some of the more antient manufactures of the country are analogous to those which have been now introduced from Europe. We allude to several sorts of cotton cloth. Dimities of various kinds and patterns, and cloths resembling diaper and damask-linen, are now made at Dakha, Patna, Tanda, and many other places.

The neighbourhood of Moorshedabad is the chief seat of the manufacture of wove silk; tafeta, both plain and flowered, and many other sorts, for inland-commerce and for exportation, are made there more abundantly than at any other place where silk is wove. Tissues, brocades, and ornamented gauzes, are the manufacture of Benares. Plain gauzes, adapted to the uses of the country, are wove in the western and southern corner of Bengal.

The weaving of mixed goods, made with silk and cotton, flourishes chiefly at Malda, at Bhagalpur, and at some towns in the province of Berdwan.

Filature-silk, which may be considered as in an intermediate state between the infancy of raw produce and the maturity of manufacture, has been already noticed. A considerable quantity is exported to the western parts of India; and much is sold at Mirzapur, a prinoipal mart of Benares, and passes thence to the Mahratta dominions and the centrical parts of Hindustan.

The tesser, or wild silk, is procured in abundance from countries bordering on Bengal, and from some provinces included within its limits. The wild silk-worms are there found on several sorts of trees, which are common in the forests of Silhet, Assam, and the Dekhin. The cones are large, but sparingly covered with silk. In colour and lustre, too, the silk is far inferior to that of the domesticated inseot. But its cheapness renders it useful in the fabrication of coarse silks. The production of it may be increased by encouragement, and a very large quantity may be exported in the raw state at a very moderate rate. It might be used in Europe for the preparation of silk goods; and, mixed with wool or cotton, might form, as it now does in India, a beautiful and acceptable manufacture.

Whether these among the numerous objects which present themselves, deserve the attention of the British merchant, or the consideration of the British legislature. we will not pretend to determine. If it should be even thought expedient and equitable that the wear of Bengal muslins be prohibited for the encouragement of English manufactures, (which appears to us extremely doubtful,)

still let the productions of Bengal have a free vent; numerous channels would be opened which could not possibly check, or interfere with, the industry of the British manufacturer. In short, to use the words of a committee of the Court of Directors, "The natives of India are equally "British subjects; and every mind must revolt at an "attempt to prevent those natives from improving the "produce of their soil by their ingenuity and labour."

The commerce of saltpetre might be slightly noticed, were it not particularly interesting on account of the decided superiority of these provinces, which is in nothing more conspicuous than in this production. Considered with a view to science, the process by which it is obtained from earth, and its reproduction in the same ground, are curious and deserving of diligent attention; but we shall not incroach on the province of others minutely to describe that process, or to speculate on the natural operation by which earth is impregnated with this salt. We shall only remark, that the elementary substances, which form nitrous acid, are known to exist in the atmosphere.

Common observers have noticed that grounds much trodden by cattle, the walls of inhabited places, and, in short, any rubbish wherein putrifying animal-substances abound, do naturally afford nitre and culinary salt by exposure to the atmospherical air. Artificial beds are made in India, as in Europe, upon these principles, but with less trouble than in most other countries. It is only necessary to collect the earth of old walls, or the scrapings of roads, cowpens, and other places frequented by cattle, and to leave mounds of such earth exposed to the weather. Both nitre and culinary salt are naturally formed there; and the saltpetre is extracted by filtering water through earth so impregnated with nitre, to dissolve and bring away the salt which it contained. The brine is evaporated by boiling, and, when cold, affords nitre by crystallisation. * The

* The culinary salt is afterwards obtained by farther evaporation of the brine; but it is much contaminated with bitter salt. In provinces of India, remote from the sea, (in Ayudh, and in

salt, thus obtained, is again dissolved, boiled, and scummed; and when it has cooled, after sufficient evaporation, the briue yields the saltpetre of commerce. In the same earth nitre is reproduced within two years in sufficient quantity to subject the earth to the same process, with equal success; mixing, however, a sufficient quantity of new rubbish, without which the nitre would be neither abundant nor easily collected.

The manufacture of saltpetre scarcely passes the eastern limits of Bihar. The parching winds from the west did not formerly extend beyond the same limits. It is a practical remark, that the production of nitre is greatest during the prevalence of the hot winds, which are perhaps essential to its abundant formation. In the change of seasons, which has been remarked within a few years last past, the hot winds have extended their influence to Bengal proper. Perhaps the manufacture of saltpetre might now be attempted with success in many districts of this province.

The actual extent of the manufacture would admit of a much greater production, than commerce is now supplied with. The present quantity, including the importation from provinces west of Bihar, falls short of 200,000 mans, the greatest part of which passes into the Company's warehouses at the first cost, which does not much exceed two rupiyas for a man. The rest, paying duty and charges of transport, and affording profit to several intermediate dealers, sells in general at four or five rupiyas the man, for internal consumption, or for traffic with different parts of India.

The exportation of saltpetre to Europe is, at all times, chiefly confined to the Company's investment, and exceeds 50,000 mans; for their annual importations into England,

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the district of Benares, for example,) a similar process is followed to obtain culinary salt, without extracting the nitre. It is only necessary to evaporate the brine, until the salt fall to the bottom of the vessel; but the natives push the evaporation too far, often leaving the brine exposed to the heat of the sun, in large shallow vats, until nothing but dry salt remain. Impure as this salt is, it may be easily refined by obvious methods, which the author of this note has often practised, and by which he has obtained culinary salt, sufficiently pure for all domestic uses.

on an average of thirteen years, ending in 1792, amounted to 37,913 cwt. At the commencement of the late war, the exportation by private persons, whether British subjects or foreigners, was entirely prohibited, lest the enemy should be supplied with this requisite means of warfare from the British dominions. It was afterwards authorized under certain limitations.

In a controversy, which arose some years ago, between the East India Company and the manufacturers of gunpowder, and of other commodities made from saltpetre, these manufacturers contended, that Great Britain ought to be the General depot of saltpetre for the purpose of supplying foreign countries with gun-powder; and that, as a raw material, the importation should be free; or at least, that it should be supplied at so cheap a rate as to enable them to contend with every competitor.

To shew that it is not practicable to render Great Britain the general depot of saltpetre, the Company argued that, from the usual prohibition against exporting it in time of war, foreign nations cannot rely upon Great Britain for the supply of gunpowder, when most wanted; and are compelled to support necessary establishments for making it, without considering the difference of expense.

There certainly is much force in the argument drawn from this circumstance; but, though it must ever prevent Great Britain from occupying the whole commerce of saltpetre and gunpowder, it need not prevent the British manufacturers from possessing the principal supply of foreign markets for gunpowder and other commodities made from nitre. The Company's sales of saltpetre increased after the price was reduced; but this has been attributed to the increased consumption by ships employed in British commerce. Were that the true cause, it would follow that Great Britain consumes more saltpetre when at peace than when engaged in war: for, by the statement, published by the Court of Directors, of the quantity of saltpetre put up and sold from the year 1763 to 1792, it appears, that they sold 295,673 bags in thirteen years of peace from 1764 to 1776, or 22,744 per annum; and 76,059

bags in six years of war from 1777 to 1782, or 12,676 per annum; and 331,301 bags in ten years of peace from 1783 to 1792; and, likewise, that the smallest quantities sold are in the four years from 1779 to 1782, when the war was most general, viz., 39,598 bags, or on a medium, 9,899 per annum. It seems almost incredible that Great Britain should consume less saltpetre when at war with all Europe than in a period of profound peace; and yet, as the account of the saltpetre sold by the Company is more authentic, and may be better trusted, than the accounts of the saltpetre and gunpowder exported from Great Britain, it follows, from the facts proved from their documents, that the great difference between the quantity sold in peace and in war must be ascribed to the circumstance of exportation being prohibited in war; and, consequently, that a foreign demand for saltpetre, and for the manufactures made from it, is not wanting.

Notwithstanding the necessity for all military governments maintaining establishments for the home-manufacture of saltpetre, the manufacturers of Great Britain, supplied with the raw material at the rate of thirty pounds for a ton, must command every market in Europe, so long as saltpetre cannot be made in Europe for less than three times that price. Unless foreign governments prohibit the importation of gunpowder, with a view to encourage their own establishments, their subjects will not, as in Spain, pay eight pounds sterling per 100 pounds by weight, for that which is made from Spanish nitre, while they can be supplied with British gunpowder at four pounds.* We must, however contend that there is not

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* Prime cost to the Company of one ton of saltpetre, shipped for five current rupiyas the bag, Rupiyas 67... ... ... £ 6 14 0
Freight, fifteen pounds the ton 15 0 0
Interest, six per centum on the prime cost ... 0 8 0
Insurance, three per centum 0 4 0
Charges of merchandise, ten per centum on the prime cost 0 13 6

Carried over 22 19 6

sufficient reason for compelling the Company to supply the manufacturer with saltpetre at the rate above-mentioned. Whether it be imported by private traders or by the Company, the market ought to be left unshackled; and the manufacturers of gunpowder would be thus better secured, than by any compulsory expedients, in the certainty of an ample and cheap supply of saltpetre.

It does not appear upon what grounds they estimate that 100,000 bags of saltpetre could be used in Great Britain, if the importation were free, to enable them to rival foreigners in the supply of foreign markets; but cer-

	Brought forward	£ 22 19	6
Customs		7 15	0
Price of one ton	£ 31 0	30 14	6
Deduct wastage at five per centum	... 1 11	29 9	0
	Loss	£ 1 5	6
Prime cost of a ton of saltpetre, to a free trader at an advanced price, shipped for eight rupiyas the bag, Rs. 107		£ 10 14	0
Freight, six pounds the ton		6 0	0
Interest, five per centum on 16 14...		0 16	9
Insurance, six per centum on 21 10		1 5	9
Charges of merchandise, at ten per centum on the prime cost		1 1	6
Customs		7 15	0
Price per ton	£ 31 0	27 13	0
Deduct wastage five per centum ...	1 11	29 9	0
	Profit	1 16	0

This exhibits a profit of seventeen per centum on the prime cost, after estimating every charge, but freight, higher than is incurred by the Company, and after allowing a better price to the manufacturer in India. By economy in the charges, saltpetre might perhaps be afforded for twenty-five pounds per ton. In Spain, the country of Europe most favourable to the manufacture of saltpetre, its prime cost is certainly not less than £88 10 per ton, (see Townsend's Travels in Spain); but, if it be true that the Spanish monopoly does not gain by selling at thirteen pence and a half for the pound, the real cost is more than £120 per ton.

tainly, if commerce were free between England and Bengal, no foreigners could enter into competition with British merchants; and the whole saltpetre might, as every other production of Bengal, be transported to Great Britain on British bottoms. England would become the general depot for the saltpetre of India, which, underselling the nitre of Europe, would supply the foreign demand.

The production, increased in Bengal, and rewarded with a better price than is now left to the maker, would become one among many sources of wealth to these provinces. We shall take this occasion of mentioning others.

Sanguine expectations have been entertained, that many articles, which have been already tried upon a small scale, might become valuable resources; and that others, which are yet untried, might be introduced with success.

That hides are not so trifling an article, as might by some be supposed, is apparent, when it is considered, that raw hides constitute a twentieth part in value of the importations of Portugal from the Brazils. Not fewer than 120,000 skins are annually exported from the Brazils, and are valued at more than 80,000 pounds. Almost the whole of these pass into England to be tanned. Could an equal quantity be exported from Bengal, it might afford to these provinces a resource by no means inconsiderable; and it might be satisfactory to Great Britain to accept from her tributary the articles which she now purchases from a foreigner.

It is thought, by persons conversant with the subject, that there would be no exaggeration in estimating the cattle of these provinces, including buffaloes, at fifty millions. If the number did not exceed a tenth part of this estimate, the usual casualties might furnish more than the probable demand will require. At present the currier often neglects to take the hides of cattle which die a natural death.*

* A bull's hide is sold by the currier for about eight anas, but a buffalo's hide is a few anas dearer; if a better tanning be requisite, it could not raise the first cost higher than one rupiya; and the

Hides might be exported, either raw or in the state which they now come from the tanner and currier, or they might receive a better tanning; but, it is presumed, they could not be pickled to advantage; for the high price of

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skins might be shipped, and every previous charge be defrayed, for less than two current rupiyas each. One hundred buffalo hides, or two hundred and twenty-five bullock hides, may be reckoned, on the result of actual trials, equal to a ton in weight; this suggests the following calculation:

100 Buffalo hides at	2½	Ct. Rs.	250	0			
225 Bullock ditto, at	1½	...	337	8			
			587	8 or	£	58	15 0
Freight, at £6 for a ton	...	...	...	...		12	0 0
						70	15 0
Insurance, and uncovered risk, at 10 per centum,						7	1 6
Charges, duties, &c., at 15 per centum on 77 16 6,						10	13 6
					£	88	10 0

Until an actual trial be made of several thousand hides, the accuracy of this estimate cannot be confirmed; nor can it be stated, with probable correctness, what the hides might produce nett in the English market: but, certainly, they cannot be valued at less than ten shillings for a buffalo hide, and half that sum for a bullock hide.

100 Hides	...	...	at 10s.	...	£ 50 0 0
225 Ditto	...	...	at 5s.	...	56 5 0
					106 5 0
Costs and charges as before	...			...	88 10 0
			Profit	...	17 15 0
325 Hides shipped, as before, for		...		...	£ 58 15 0
Freight on 2 tons, at 15l.		...		...	30 0 0
					88 15 0
Insurance and risk on £88 15		...		...	8 17 6
					97 12 6
Charges, duties, &c., at 15 per centum on £97 12 6					14 12 9
					112 5 3
Gross sales, as before	...	...		...	106 5 0
			Loss	...	£ 6 0 3

salt must operate against that mode of curing them. It is sufficiently probable, that, at the freight of six pounds for a ton, hides might be exported with advantage and afford a profit of twenty per centum; but the rate of fifteen pounds sterling for the ton is prohibitory. Other skins, cured in the hair or otherwise, might be added to the hides of oxen; such as the skins of sheep, goats, kids, calves, and deer.

Buffalo's horns might also become an article of export. They would be useful in several manufactures. The first cost of them is very inconsiderable, consisting only in paying the labour of collecting them; this is a very trifling addition to the trouble of collecting hides; and the charges of transport would, therefore, constitute nearly the whole cost.

Should freight be ever reduced to the lowest price at which it can be afforded, corn might possibly be exported from Bengal to Europe. England does often need supplies of wheat and barley from foreign countries; but India is perhaps, too distant for timely intelligence of such an enhancement of price as will open the ports of Great Britain for the importation of corn. Rice, wheat, and barley, may be shipped in Calcutta for nearly the same price; namely, two and a half rupiyas for a bag containing two mans. This, reduced to English money and weight, exhibits three shillings and four pence or three shillings and six pence the cwt. Add, thereto, freight at four pounds for the ton and insurance at ten per centum, and it appears that rice and corn, imported from Bengal to a British port, would cost the importer little more than eight pounds sterling the ton. It is evident that he would reap some profit, after defraying all his charges at that port, by selling rice and wheat at the price which they usually bear in the market of London, and a very sufficient profit in seasons when corn is dear.*

* During the apprehension of scarcity in England, in the year 1796, large supplies of corn were drawn from Bengal. Due praise should be given to government, to the Company, and to individuals for the public spirit manifested by them on that occasion: but

But it would be more certainly advantageous to export starch from Bengal. England annually receives no small quantity of this article from Poland and other parts of Europe; much is prepared in Great Britain. The makers of it are supposed to use other materials besides wheat; at the same time, the consumption of corn in this shape is considered as an evil, because it tends to enhance the price of the necessaries of life. In every point of view, then, it would be desirable, that Great Britain should be supplied with starch from her Asiatic dominions, instead of purchasing it from foreign nations, or instead of using home-made starch, for the preparation of which her labouring poor are stinted in their food. The usual price of starch will permit the importation of it from Bengal, so soon as freight is reduced to ten pounds the ton for the homeward voyage.

In treating of sugar, we did not urge the admission of rum from Bengal. Perhaps it may be necessary to leave the British market, for this article, to be supplied, exclusively, from the West Indies. Perhaps, on the contrary, the importation of it might be allowed without any injury to the West-Indian planters. It has, sometimes, become necessary to open the British ports to foreign rum; if they were always open to the importation of it from Bengal, as from a part of the British dominions, the cultivation of sugar would doubtless be greatly encouraged by this vent for the spirit, distilled from what is useless at a sugar-plantation if it be not so employed; and whether Bengal be not justly entitled to such encouragement for her productions deserves serious consideration. However, we shall restrict ourselves, without strenuously urging this point, to state the benefits of exporting rum, even at the present retail price of it, which varies from twelve to sixteen anas a gallon, according to the age and quality of the spirits. Purchased in larger quantities, rum, of the strength called London-proof, might be shipped for the

freight was so dear, that a heavy loss must have been sustained. No inference, however, can be drawn from this circumstance against future success when freight is lowered.

lowest of these prices: and the owners of sugar-plantations and rum-distilleries could export it much cheaper. The difference between the prime-cost, at one shilling and sixpence or at one shilling and nine pence for the gallon, and the sale from three to five shillings for the same measure, will amply defray insurance and freight, and leave sufficient profit to the merchant.

Liquorice is consumed in England more largely than the culture of it in the British Islands supplies; annual imports from other parts of Europe furnish the remaining wants of London. The plant, from the root of which it is extracted, is found in Bengal, both wild and cultivated; and inspissated juice might be prepared sufficiently cheap to bear the charges of transport to Europe. Another root, which England imports from distant countries, is a native of India, and has been thence transferred to the West-Indian islands. We allude to ginger, which is cultivated in every part of Bengal, and which can be conveyed to Europe cheap enough to undersell the produce of other countries. But neither this, nor the object last-mentioned, are of sufficient magnitude to detain us from the consideration of more important topics.

No argument occurs against the probability of annotto, madder, coffee, cocoa, cochineal,* and even tea, thriving in British India. The countries, in which the English hold

* Since this was written, (in 1794,) the cochineal-insect has been brought to India, from the Brazils, by Captain Neilson. The spirit and patriotism of that gentleman (now deceased) should receive its due praise; but, unfortunately, the insects, which he brought, were of an inferior sort, covered with cottony down, and known by the name of Grana Sylvestra in the European market. They were, nevertheless, reared with care, and plantations of opuntia soon rose in every part of Bengal. The experiment seems to have been attended with disappointment, notwithstanding the high price of cochineal in Great Britain. The chief cause of its failure appears to be, that the plant is too quickly destroyed by the insect. If a better management be adopted, and the other variety of this insect be obtained from South America, or if the natives of Bengal be induced to engage in this enterprise, Europe may, hereafter, be supplied with cochineal from India to the full extent of its wants.

either dominion or paramount influence, from Heridwar to Cape Comorin, afford opportunity for experiment in soil and climate similar to those in which these products are obtained in other countries. It is well known to the naturalist, that many of the birds, insects, and indigenous plants of India, are found in South America; hence seems to arise an incontrovertible argument, that the soil and climate must be similar in whatever is essential to the production of those articles which South America now furnishes. That India might rival China in the productions which are, at present, exclusively supplied by that empire, is not, perhaps, so highly probable;* but, until expectation be disappointed by actual trials, made under other circumstances than the discouragements which we at present lament, it is reasonable to hope, that, in favourable circumstances, every article which we have indicated might be introduced with success.

The plant, from the seeds of which annotto is prepared, by separating the colouring-matter which adheres to them, is already cultivated in Bengal. We are unacquainted with the history of its introduction into this province, but it certainly appears to be exotic. Trials have been made with this drug in the English market, but they do not seem to have been attended with sufficient success to warrant the spirited prosecution of the enterprise; although some specimens of annotto from Bengal equalled the best that is imported from Spanish America.† As the plant is perennial, and thrives with little care or choice of soil, the culture of it may become more general, when the best method of preparing the drug shall have been ascertained by judicious trials and confirmed by successful experience.

* It has been asserted, we do not know with what degree of accuracy, that the tea-plant grows wild on the island of Silan. This circumstance tends to confirm our opinion, that it is practicable to introduce the culture of tea into British India.

† Annotto, sold at the Company's March sales, in 1795, averaged three shillings a pound; the best sold for six shillings and six pence. Spanish annotto usually fetches from six to seven shillings for a pound.

Coffee-plants have thriven in botanical and private gardens throughout Bengal. It is even said, that the plant has been found wild in forests bordering on this province; but the sorts which have been here cultivated were imported from Arabia and from the French islands. Good coffee has been gathered, but in quantities too small for a sufficient trial of it; and no commercial experiment, so far as we are informed, has been yet made to ascertain whether it can be furnished cheap enough to rival the produce of the West India islands in the markets of Europe.

Madder (or more properly majit'h, for the Indian sort is different from the dyer's rubia) is a native of the mountainous regions which border on Bengal. For several years past majit'h has been annually exported to England, and has fetched half the price of Smyrna and Dutch madder-roots. If it were cultivated in India, instead of being carelessly gathered from plants, which grow wild in the forests of Moraug, its quality would doubtless be improved by culture, and also by care in the drying of the roots, and it would better rival the madder of Europe.

Bengal already possesses many other objects, which would be brought into notice by a more extended commerce. Red saunders and sapan wood, imported from other parts of India, are used for dunnage in the present trade; true saudal-wood might likewise be so employed, if it can, at any future period, be brought to Bengal sufficiently cheap: other sorts of colouring or fragrant wood, which are actually found in these provinces, might be applied to the same use, and might, consequently, be transported to Europe free of any expense for freight. In default of these, wood for the cabinet-maker may answer the purpose of dunnage; it is already ascertained, that satin-wood, and other ornamental sorts from Bengal, have been tried in England, and have been highly approved.

Besides those which we have already indicated, various drugs used in dying are now exported to England, and might be furnished more abundantly if the price of freight were lowered. It may be sufficient to enumerate galls, turmeric, safflower, or carthamus; and to propose my-

robalans, which are here used in preference to galls, for various purposes, for which astringent substances are required; roots of morinda, which dye a very permanent colour on cotton; and blossoms of the sorrowful nyctanthes which give a durable colour to silk.

Gum-arabic, and many other sorts of gum, which are requisite in various English manufactures, and resins, which might be usefully employed, are the produce of trees that grow spontaneously in Bengal. We do not notice medicinal gums, although these likewise abound in India and in contiguous countries, because the demand for them is limited, and they can well afford the highest freight. For the same reason we leave unnoticed other medicinal drugs; though many sorts, which have found a place in the modern Materia Medica, and others, which ought, perhaps, to be admitted there, abound in Bengal.

Vegetable oils, which England imports from other countries, might be supplied from these provinces, especially linseed-oil. Flax might, perhaps, be prepared in Bengal, and rival the imports from the north of Europe in the British market; hemp, too, may be prepared from the plant already cultivated here for a different purpose, and relieve Great Britain from the heavy tribute which her commerce and navy now pay to Russia.

Tincal, brought from the mountains of Tibet, is among the present exports of Bengal; but, if we are not misinformed, most of it passes into Holland to be there refined. The English chemists are now said to possess the art of refining borax equal to that of the Dutch process, and London might become the mart for this article. It has been exported from Bengal in a purified state, and was sold in England for twelve pounds ten shillings per cwt. in 1795, when English refined borax fetched fifteen pounds; but it was subject to the same discouraging duty with Dutch borax. We shall not presume to give any opinion regarding the policy of continuing this heavy duty on an article, which could certainly be drawn exclusively to England, by permitting the importation of borax that has been refined in Bengal.

Vegetable and mineral alkalis may become a considerable object of commerce. The fossile alkali is found in abundance, and the woods of Bengal would furnish potash in great quantities. Some is already exported to England; more would be sent thither were the freight moderate.

The preparation of sal ammoniac can be connected advantageously with the manufacture of saltpetre, or be separately pursued to a much greater extent than at present. Several other materials required for British arts and manufactures might also be prepared in Bengal by a chemical process.

The jealousy of Great Britain respecting her manufactures, and her solicitude for extending them, regards finished works, which give employment to numerous manufacturers, and, at the same time, add more to the value of the raw material than the mere price of their labour. Intermediate preparations, for which machinery is substituted in place of manual labour, or to which the latter cannot in England be applied so as to add more than the price of labour to the value of the materials, do not constitute a manufacture of which Great Britain can be jealous. This observation seems applicable to cotton-yarn, which the British manufacturer might receive, in preference to cotton-wool, for such manufacturers as admit of yarn being prepared out of the verge of his own superintendence. It is well known, that cotton-wool from India has been approved in Europe: and, among the many various sorts of cotton grown in these provinces, whatever sort may be found best suited to the wants of the British manufacturer would become an object of extensive cultivation. But, since cotton-wool occupies much tonnage in proportion to its weight, it is desirable that it should receive a preparation which would greatly diminish the charges of transportation.

If silk could be imported in the cocoon, Great Britain cannot be so eagerly ambitious of more employment for the industry of her native subjects as to refuse the admission of silk wound at foreign filatures. Yet, to this supposed case the commerce of cotton is similar; and

British manufacturers can have no better objection to the importation of cotton-yarn than they would have to that of silk-thread.

To a government enlightened as that is, by which British India is administered, it cannot be a trifling consideration to provide employment for the poorest classes. No public provision now exists in these provinces to relieve the wants of the poor and helpless. The only employment in which widows and female orphans, incapacitated for field-labour by sickness or by their rank, can earn a subsistence, is by spinning, and it is the only employment to which the females of a family can apply themselves to maintain the men, if these be disqualified for labour by infirmity or by any other cause. To all it is a resource, which, even though it may not be absolutely necessary for their subsistence, contributes, at least, to relieve the distresses of the poor. Their distresses are certainly great; and among none greater than among the many decayed families which once enjoyed the comforts of life. These are numerous in India; and, whether they be entitled to the particular consideration of Government or not, they have certainly a claim on its humanity.

In this view, it appears essential to encourage an occupation which is the sole resource of the helpless poor. That such encouragement would supply commercial advantages to England, we think can be also proved. For this purpose, it might be shown that cotton-yarn could be imported into England from Bengal cheaper than cotton-wool. Large quantities of linen and woollen yarn are admitted, duty free, from Ireland. If it be not considered as injurious to the manufacturing interest of Great Britain to permit the importation of linen and woollen yarn, why discourage that of cotton-yarn from Bengal by a heavy duty, besides all the other impediments which we have so often occasion to notice?

Many dyes and medicinal drugs as well as aromatic seeds and other grocery now imported into England from the south of Europe and from the Levant, could be supplied

from India.* It is not necessary to the argument that for these and other articles which we have indicated, it should be shewn that British India could undersell every other country from which Great Britain is now supplied; nor that each article, separately considered, would become an important object of commerce: collectively, they might become a source of wealth to these provinces. That England ought not to discourage the commerce of her own subjects and tributaries, in favour of foreign nations, is an axiom which need only to be stated to be admitted.

* As we have restricted ourselves to treat of one part only of British India, we have not noticed many objects, the consideration of which would have led us far from Bengal. It may suffice to remark, that India does furnish aloes, assafœtida, benzoin, camphire, cardamums, cassia lignea, and cassia-buds, arrangoes, cowries, China-root, cinnabar, cloves, cinnamon, nutmegs, mace, elephant's teeth, gums of various sorts, mother of pearl, pepper, (quicksilver and rhubarb from China,) sago, scammony, senna, and saffron; and might furnish anise, coriander, and cumen, seeds, and many other objects which it would be tedious to enumerate.